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EFFLUENTS REGISTRY MANUAL, PART I. INSTRUCTIONS FOR THE INDIVIDUAL RECORDING OF EFFLUENTS INTO THE OPEN AIR AND WATER. (5TH REVISED EDITION)

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EFFLUENTS REGISTRY MANUAL, PART I

INSTRUCTIONS FOR THE INDIVIDUAL RECORDING OF EFFLUENTS INTO THE OPEN AIR AND WATER

(5th revised edition)

[Handleiding Emmissieregistratie, Deel I. Instructies voor de Individuele Registratie van Lucht- en Wateremissie (5e Herziene uitgave)]

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PREFACE

This document deals with the system of recording air and water pollution effluents and was developed in connection with the project "The Registry of Effluents Leading to Air Pollution". The system was developed in close co-operation with the TNO, the Ministry of Public Health and Environmental Hygiene, the Ministry of Public Works, and the Zuid-Holland provincial ministry of Public Works. Use was made of a system developed in Germany by TUV Rheinland e.V. for the state government of Rheinland-Westfalen as well as of recommendations from many organizations in the Netherlands.

TABLE OF CONTENTS

1. PURPOSE AND PLAN OF THE SYSTEM FOR RECORDING EFFLUENTS 3

2. INSTRUCTIONS FOR THE COMPLETION OF THE DATA FORMS 6

2.1 THE PLANT COMPONENT 7

2.2 THE MATTER COMPONENT 11

2.3 THE INSTALLATION AND APPARATUS COMPONENT 13

2.4 THE AIR POLLUTION SOURCES COMPONENT 21

2.5 THE WATER POLLUTION SOURCES COMPONENT 24

2.6 THE AIR POLLUTION EFFLUENTS COMPONENT 28

2.7 THE WATER POLLUTION EFFLUENTS COMPONENT 35

APPENDICES

1. QUESTIONNAIRE FORMS 1-1

2. COMPUTER CARD FORMAT FOR THE MATTER COMPONENT 2-1

3. CODES

3.A Type of Modification A-1
3.B Plant Function B-1
3.C Municipality C-1
3.D Province D-1
3.E Control on the Air Quality E-1
3.F Control on the Water Quality F-1
3.G Material Grouping G-1
3.H Kinds of Installations H-0-1
3.I Kinds of Apparatus I-0-1
3.J Units of Capacity J-1
3.K Recording Agency K-1
3.L Kinds of Air Pollution Sources L-1
3.M Kinds of Water Pollution Sources M-1
3.N Purification Jurisdiction N-1
3.O Collecting Surface Level Watercourses O-1
3.P Form of Effluent released into the Open Air P-1
3.Q Expected Mass, Volume or Heat Flow Q-1
3.R Means of Producing Effluent R-1
3.S Units of Frequency S-1
3.T Units of Time T-1
3.U Kinds of Gas Cleaning U-1
3.V Details on the Measurement V-1
3.W Nature of the Water Effluent W-1
3.X Type of Water Purification Apparatus X-1

4. MISCELLANEOUS INSTRUCTIONS PERTAINING TO THE RECORDING PROCESS 4-1

4.1 Effluents and Capacities to be Recorded 4-2
4.2 Calculation of the Variation in the Mass and Volume Flow 4-4

1. PURPOSE AND PLAN OF THE SYSTEM FOR RECORDING EFFLUENTS

The purpose of the system for recording effluents is the collection of information on effluents that lead to air and water pollution. This information is valuable for the establishment of a supervisory control that will lead to a reduction in the amount of environmental pollution, as well as for use in the expansion and new development of industrial plants, suburbs, agrarian concerns, and highways. As a result, not only are the nature and quantity of the effluents recorded but also their sources (a plant or an apparatus), their location and the manner in which they enter the environment (the source).

In order to enable a simple analysis of the data to be possible, the system uses seven so-called components. The system is similar to a certain degree to that system developed by TUV Rheinland e.V. in Cologne. These components consist of collections of data which concern themselves each with a different major aspect of effluents.

The components are:

1. The plant component which records data on the location, nature and magnitude of those plants with installations which could lead to environmental pollution. Each establishment with its own independent operation is recorded in this component as a separate plant.
2. The matter component which records data on a number of properties of the matter which is released into the environment.
3. The installation and apparatus component which records data on the nature, capacity and location of the installations and apparati which produce effluents. An "installation" is considered here to be a technical processing unit (a unit whose function is to produce a finished or semi-finished product) while an "apparatus" is to be considered as a "mechanical" segment of such an installation.
4. The two source components which record data on the nature, measurements and location of those orifices through which matter leading to air and water pollution pass into the open air or into the surface-level watercourses (or, in the case of so-called indirect waste water discharges, into sewage systems or waste water purification installations).
5. The two effluent components which record data on the nature, magnitude, length of time and frequency of effluents leading to air and water pollution. At the same time the installation in the installation component is identified for each

effluent as well as for the source in the source component that leads to its escape into the environment (or into a sewage system or water purification installation).

The recording system is so arranged that installations (or apparati) and sources can be individually and independently treated. This means that a source is not included in an individual installation (or apparatus) but operates as an independent entity within the plant. This is necessary because effluents in many cases can be produced by several independent installations at the same time, and yet still can be released into the environment by the same source. The reverse can also occur.

One can say in summary that:

- an effluent is the release of environmentally polluting matter.
- the cause of an effluent is always an installation or, as the case may be, an apparatus within an installation.
- the orifice through which the effluent passes into the environment or into a sewage system is called a source.
- for every effluent, the cause (the installation or the apparatus therein) and the orifice (the source) is recorded. Of course, installations, apparati, and agents giving rise to no effluents are not recorded.

In order to be able to compare and analyze later the data collected in the various components, it is essential that these be arranged in a concise form. Therefore, the data concerning effluents, sources, installations, matter and plants have been divided into categories. In Appendix 3.H all plants which can be encountered in the business world have been included in a number of categories each of which has a code number to enable an easy analysis by computer. These categories are rigidly determined and for recording purposes all attempts must be made to follow this coding. If that should not be possible, consultation with the project directorate should be made so that, if necessary, an extension of the code under question can be made.

The recording of plants, installations and apparati, sources and effluents is done on the questionnaire forms in Appendix 1. All requested information must be legibly filled in, in pencil. At the same time, and as much as possible, fundamental data such as, name of the matter, quantity of fuel and other calculations should be given on the questionnaire or on an attached sheet. After the completion of the questionnaire it should be dated by the data collector. Later the data should be carefully examined and then presented to the appropriate team group leader. He will check the questionnaires once again and then initial them. Then the forms together with all other pieces of information such as maps, blueprints, block diagrams, calculations and the like should be submitted to the project directorate. Here the final check is made and they are then sent to the Minister of Public Health and Environmental Hygiene.

The analysis and recording of the matter is done by the project directorate using the computer card format shown in Appendix 2.

In what follows there is presented a more accurate instruction set for the completion of all data sheets. In order for the registry of effluents to have a meaningful result, it is of major concern that the data collector follow precisely this instruction set.

2. INSTRUCTIONS FOR THE COMPLETION OF THE DATA FORMS

The following instruction set must be accurately followed since only then will the systemics of the recording agree with the data stored in the various components; much extra effort later can be avoided.

All questions on the data forms must be answered insofar as they are requested by the appropriate instruction. Any data form which is not completed in full without adequate explanation will be returned to that data collector providing the form.

2.1 THE PLANT COMPONENT

The data sheet for this component is the first form that should be completed by the recording team on its visit to the plant. Each separate establishment of a plant, that is each geographically separate unit,must be recorded as a separate "plant".

Plants which have no effluent particular to its operation, that is its only effluents arise from heating plants, toilets, etc., need not be individually recorded. They ought to be collectively recorded on the basis of the number of their employees. In order to indicate whether these plants have been approached, a data form must still be completed for control purposes. No plant number need be included.

For the recording of effluents in and around harbours the following directives must be followed:

1. Maintenance activity on ships

   Effluents resulting from maintenance activities on ships, berthed at a plant, must be recorded for the plant in question, if the plant (such as a dockyard) carries out these activities itself or commissions them to be done (for this latter case see the directives under "subcontractors"). If it is a question of activities carried on under the responsibility of the ship's officers, then the effluents should be included under the "collective recording".

2. Lading and ballasting of ships

   Effluents resulting from the lading and ballasting of ships, berthed at a plant, must, as far as possible, be recorded for the plant in question, if even under a separate plant number with the name "harbour" together with the name of the plant. Thus the loading or ballasting of ships in the harbour of the XYZ Refinery must be recorded under a plant name of "XYZ Refinery (harbour)" together with a plant number different from that of the XYZ Refinery itself. For plants which could have this activity it is advisable to ask the project directorate to reserve a plant number consecutive to that for the plant itself. This will make it more convenient later to retrieve the various plant numbers from the computer.

3. Unloading of Ships

   Effluents resulting from the unloading of ships at a plant usually always occur in the plant itself. They must then be recorded for that plant. If they occur on the ship, then they are to be treated as in point 2.

4. Cleaning of Ships

   Effluents resulting from the cleaning of ships must always be attributed to the cleaning plant if the activities relate to cleaning concerns. If it is a question of activities which are incidental to the plant's activities, then they should still be recorded for the plant but under a separate plant number with the inclusion of "(harbour)" together with the name of the plant in question (see point 2).

If desirable, effluents resulting from activities at a plant resulting from the collective activity of subcontractors may be recorded under a separate plant number with the notation "(subcontractor(s))" after the name of the plant in question (N.B. do not give the name of the subcontractor).

It can occur that employees of a plant, not separately recorded, are transferred to the site of a concern that has been recorded. In such cases the boiler installation for space heating must be completely included. In the section on "collective recording" a statement must be made of the number of personnel attributed to the unrecorded concern, if this number is greater than 25.

The following rules hold for the completion of the questionnaire forms:

1. Card Code

   For the plant component the card code is 39001.

2. Type of Modification

   If the following data has never been included in the computer file, put in the value 1. If the data is to update data already in the file and put there at an earlier date, put in the value 2. If data is to be removed from the computer file, put in the value 3.

In the cases of modification of the existing file, all data must be resubmitted. For the cases of removal from the file, only points 1 to 3 inclusive need to be completed.

3. Plant Number

This 6-digit number is provided by the project directorate. If necessary, as in the case of harbour activities and of activities carried out by subcontractors, extra numbers should be requested. As far as possible these numbers should be consecutive with the number of the plant itself.

4. Plant Function

The code for this is given in Appendix 3.B and is the standard plant division code SBI-74 generated by the National Bureau of Standards (CBS). For activities in harbours and by subcontractors the same function code is recorded as for the concern itself.

5. Name

Give the official company name. If the plant is a 100% subsidiary of a larger concern, give in parentheses also the name of the parent organization. For harbours and subcontractors, refer to the directives given in the earlier points.

6. Address

Give the street address of the site or, if necessary the postal address. If the street address is never used, give the postal box number. For harbours and subcontractors fill in the same address as for the plant itself.

7. District

Give here the district appropriate to the site or its postal address, including if necessary the name of the province.

8. Number of Employees

Give the number of employees in the plant. For harbour activities, the value nil must be given. For subcontractoral activities, the average number of workers employed and present on the part of the subcontractor should be given unless they have already been included in the number of employees of the plant itself. In that case the value nil should be given.

9. Municipality

Give the municipality in which the site is located by using the municipality codes given in Appendix 3.C. Make sure that it is the municipality appropriate to the site. It is not necessarily the same as that of the postal address.

10. Province

Give the province in which the municipality given in section 9 is located by referring to the provincial codes given in Appendix 3.D.

11. Control on the Air Quality

Give here the appropriate law under which the plant falls and through which agency this control is carried out. If this is not known, contact the project directorate. Use the codes in Appendix 3.E. For activities in harbours and by subcontractors,use the same code as for the plant itself.

12. Control on the Water Quality

Give here the agency which has control over the waste water discharges. If this is not known, contact the project directorate. Use the codes in Appendix 3.F. For activities in harbours and by subcontractors use the same code as for the plant itself.

13. Year of Recording or Modification

Use only the last two digits, e.g. 75 for 1975.

14. Contact Person in the Plant and Telephone Number

The name and telephone number of the contact person(s) is given here. Since this is not recorded in the computer file, there are no boxes given for this on the questionnaire forms.

2.2 MATTER COMPONENT (not to be used by the data collectors)

The information in this component is recorded by the project directorate. It is directly recorded in computer card format.

The following rules hold:

1. Card Code

   The matter component code is 39002.

2. Type of Modification

   If the data recorded is new, fill in the value 1. If it is a modification of existing data, fill in the value 2. If data is to be removed from this component, fill in the value 3. For modification, the whole line in the card format must be filled in. For removal of data, fill in points 1 to 3 only.

3. Material Number

   All material has been given a number beginning with the number 0001.

4. Material Grouping

   Use the codes given in Appendix 3.G.

5. Polluting Effect

   If the material is very polluting (such as soot or tar) fill in the value 1. If it is clearly not so, fill in the value 0. If its polluting effect is not known, leave blank.

6. Odour

   Fill in as for point 5, but now for its odour. Mercaptans are very odourous, for instance.

7. Toxic Effect

   Fill in as for point 5, but now for its toxicity. Some heavy metals and pesticides are very toxic.

8. Corrosive Activity

   Fill in as for 5, but now for its corrosive activity. Strong acids and bases are very strongly corrosive materials.

9. Number of Carbon-Atoms

   Include the chemical composition when known and the number of C-atoms in the molecule.

10. Number of Hydrogen-Atoms

    Do the same as for 9, but now for the number of H-atoms.

11. Number of Nitrogen-Atoms

    Do the same as for 9, but now for the number of N-atoms.

12. Number of Oxygen-Atoms

    Do the same as for 9, but now for the number of O-atoms.

13. to 18. Other elements

    Up to six other elements can be given here if the chemical composition of the compound is known. This should be done in ascending atomic number. In the first 2 positions should be the chemical symbol of the element in question (if it has only one letter, then only in the first position) and in the third position should be the number of atoms per element per molecule.

19. Name

    Put here the most common chemical name for the material. In parenthesis following the name include the Geneva convention name for the compound. Start with the first box in the data format. The use of trade name should, if at all possible, be avoided.

20. Year of Recording or Modification

    Fill in only the last 2 digits of the year, e.g. use 75 for 1975.

2.3 INSTALLATION AND APPARATUS COMPONENT

Questionnaire forms for this component should only be filled in for those installations which as a whole or through intermediary of apparati give rise to effluents. This component provides the information on the installations and apparati which give rise to effluents leading to the pollution of the air and the water. This component is not an independent piece of data but must be considered to be a supplement to the data to be given in the Pollution Effluents component.

Before commencing with the data collection on the types of installations and apparati, a block diagram of the plant must first be prepared. It will show the plant subdivided into installations, that is more or less independently operating units. The installations which give rise to effluents should be numbered in the block diagram beginning with the number 001. A consecutive numbering system is to be preferred although this is not absolutely essential. Those apparati within each installation which substantially contribute to the effluent of the installation should be numbered within the installation and beginning with the number 01. Here also a consecutive numbering system is not necessarily requisite.

The following rules must be kept in mind when subdividing and numbering installations and apparati:

a. An installation is a more-or-less independently functioning unit. Often it will be a unit which produces a certain product or semi-finished product. (Refer to the code list in Appendix 3.H). In many cases the installation will be a separate plant. In some plant activities, for instance in the metal industry, several operations take place or overlap at the same time. In that case one should try to group together those activities of the same kind and collect them together as an installation (for instance, all related activities in an assembly line should be collected together into one installation). For smaller plants one will have only a few installations to deal with, for instance the installation "office" (no. 1060) and one other installation for the production line.

b. To differentiate between installations and apparati it should be noted that to record an installation it is a matter of why the activity under question is being carried out, while for the recording of an apparatus it is a question of how the activity is being done. An installation concerns itself in general with the details of a process; an apparatus concerns itself in general with the technical (mechanical) means of carrying out the process.

c. Several types of installations have been arranged into groups in the code lists in Appendix 3.H. The first installation named in such a group is usually the so-called "general installation". This means it is a collection of 2 or more installations falling together in the same grouping. One should only use this type of designation if there is in fact such a collection of different installations and ought not to be confused with the classification "other kinds" of installations mentioned at the end of each grouping. The use of the term "general installation" will only be necessary if the effluents of the various installations are such that they can not be divided among the group (not even by estimation) but that it is a case where only the sum total is known. Refer to point g below.

d. The installations for storage, shipment and pipeline transport in code list H.2 in Appendix 3.H should only be considered as separate installations when it is absolutely certain that they can not be included in another installation. They will occur, however, when it is a question of storage companies or for very extensive storage lots. In all other cases the storage and shipment must be recorded as part of those apparati (see codes in I.2) belonging to the installation for which the shipment and transport is most closely connected (for instance the production installation or the first or last installation in a production line, if it is a question of several installations in series).

e. Water purification apparatus is considered to be a separate installation if:
   - it is a question of biological purification, or
   - the waste water treatment apparatus treats the water flows from 2 or more installations simultaneously.

In all other cases purification apparati for gases and water are recorded in the Pollution Effluent component under the appropriate gas purification type (refer to the Air Pollution Effluent Component, points 22 and 23) or water purification type (refer to the Water Pollution Effluent Component, points 21 and 22).

f. Groups of installations or apparati of one kind that simultaneously produce the same or nearly the same type of effluent may be grouped under one installation or apparatus number provided they are located within the same map segment of the topographical map (refer to point 11). One should then give the number of installations considered to be one recorded unit (see point 6). The combined values of an installation or segment of an installation can also be recorded as a separate apparatus. If the number is equal to or greater than 100 use the value 00 (i.e. 100) in point 6 but make a note, next to the boxes given, of the exact number.

g. If certain types of effluent are only known for the sum of 2 or more installations and they can not be separated even by estimation into separate installations, then these installations, as far as the effluent is concerned, can be recorded as a combination. It could occur that for certain effluents 2 installations are recorded under their own number, but that for other effluents they are recorded as a combination which has its own installation number. For reporting the nature of the combination one should in some cases use the term "general" installations as mentioned in point c above. If that can not be done, then the installation must be characterized by its corresponding plant function number. In those cases one records a number for the "kind of installation" (refer to point 7 below) that starts with a 0 and then follows with the 3-digit plant function code assigned to the plant in the Plant Component.

Once the block diagram and the numbering is completed, prepare for each of the numbered installations and apparati a questionnaire form according to the following instructions (points 1 to 16). Make sure that there is a data form for all installations numbered, even for those where only effluents from apparati within the installation have been recorded.

Next complete the data forms for the sources and effluents. (For instructions refer to para. 2.4 to 2.7 inclusive). If there is certain information which can not be put immediately into the questionnaire because the information is not immediately available, indicate this clearly on the form by putting a cross in the margin.

Remember when determining the desired accuracy of the various data requested that each item has a varying importance as far as the registry is concerned. The amount of matter flow in the effluents is the most important piece of data. The volume flow on the contrary is less important. So is the capacity of the installation. Thus one can be less accurate with these numbers. For the checking of data forms, more attention will be put on the most important data. Aside from the above the following rules apply when filling out the data forms for the installation and apparatus component:

1. Card Code

   The code for the installation and apparatus component is 39003.

2. Type of Modification

   If the information to be recorded is new, fill in the value 1. If it is a question of the modification of earlier data, fill in the value 2. If data must be removed from the file for this component, fill in the value 3. For modifications, fill in again all the data. For removal of data fill in points 1 to 5 only.

3. Plant Number

   Insert the plant number assigned to the plant in the Plant Component.

4. **Installation Number**

   For installations insert here the number assigned to the installation according to the procedure mentioned above. For apparati fill in the number of the installation to which the apparatus belongs.

5. **Apparatus Number**

   For entire installations fill in the value 00. All apparati belonging to one installation can be consecutively numbered, if desired, in such a fashion that for each installation one begins with the number 01. Make sure that if an apparatus is numbered it must also belong to an installation which in turn must have its own data form.

6. **Number of Installations and Apparati**

   Whenever similar installations or apparati (i.e. installations which would have the same code number assigned in points 7 and 8) are operated simultaneously or in the same manner and as well are located in the same map sector of the topographical map, they can be considered to be one unit. One reports here the number of such grouped installations.

   If there is only one installation or apparatus, fill in 01 or leave blank.

7. **Kind of Installation**

   Use here the codes given in Appendix 3.H to indicate the nature of the installation or of the nature of the installation to which a particular apparatus belongs. There will be cases where it will not be possible to characterize the combination by means of the codes given in Appendix 3.H for those installations whose effluents have been impossible to determine individually. In those cases one should record a number for the kind of installation that begins with a 0 and then follow it with a 3-digit Plant Function code assigned to the plant in the Plant Component. One should only use this type of solution if no other solution to the problem is possible.

8. **Kind of Apparatus**

   Use here the codes given in Appendix 3.I to specify the nature of the apparatus. For complete installations use the code 0000.

9. Nominal Capacity

Record here, in units appropriate to the nature of the installation or apparatus listed in Appendix 3.H and 3.I, the nominal capacity of the installation or apparatus. By "nominal capacity" of an installation one means the maximum average production capacity in a period between 2 shutdowns. In the processing industry this capacity is usually called the "streamday capacity". Since installations often have been modified after being brought into production their nominal capacity can be appreciably higher than their design capacity.

Since the max. average capacity of an apparatus is not usually known, the "nominal capacity" must be interpreted to mean the design capacity, provided that no change in capacity has occured because of a "bottlenecking" problem. Should that be the case, one should report the new "design" capacity.

For a group of installations or apparati taken together, always report the total capacity of the group.

For the capacity of a combination of one kind of installation, as determined from the Plant Function coding, use the units g/h. The capacity is indicated by means of a 5-digit mantissa and exponent. Use only the exponents 0, 3, 6, or 9. Then, for instance, 250 x 10^5 would be written with a mantissa 0025 and an exponent 6. Take care that no errors occur when calculating the exponent since an error here will always lead to serious errors in the results.

10. Units of Capacity

Use the numbers given in the column "units code" in Appendix 3.H (when recording installations) or in Appendix 3.I (when recording apparati).

11. Location

Consult the topographical map to determine the sector in which the installation or apparatus is located. Specify the lower left hand corner of this sector by giving the values of the horizontal and vertical axes respectively. Record these under "hor. km." and "vert. km.". Make sure the recording order indicated has been followed correctly. If the results have been determined correctly the number reported under "hor. km." will always be less than 300 and that for "vert. km." always greater than 300. Determine the location of the centre of the installation in tens of meters from the point specified above by taking measurements from the topographical map or from the ground plan of the plant.

If an apparatus is located not too far away from the centre of an installation, then the same location can also be given for it as for the installation.

12. Name (and actual capacity)

Note the name commonly used in the plant itself for the installation or apparatus. If there should be no name for it use the terminology given in the code listings in 3.H or 3.I. Take care that it will be possible to identify the installation or apparatus by name within the plant. Be as specific as possible and if necessary give a supplementary description. Use any necessary (recognizable) abbreviations.

All boxes except two may be used for the recording of the name of the installation. The statement of the name of the installation must not contain more than 30 letters, digits, punctuation marks and spaces. The last 2 boxes are used for the recording of the average actual production capacity during the time that the installation is in operation. For a further description of what precisely is meant by "actual" refer to Appendix 4, para. 4.1. If an installation has different production capacity for various processes, then the weighted mean of the production capacities should be noted. Note that, in general, the term production capacity means the capacity during the time that the installation is in fact in operation (and not averaged over hours of running and shutdown). For furnace installations which operate on an off-on cycle, an average is taken over the on and off periods (see the Introduction and point 10 of para 2.6). For intermittant operation such as for lathe work, welding, milling and cutting work the same type of average may also be taken.

The production capacity is recorded as a percentage of the nominal capacity recorded in point 9 (N.B. not in tens of percent such as was the case for the data forms for the Pollution Effluent component). If the percentage is equal to 100%, use the value 00. For the recording of apparati the actual capacity is not given. All 32 boxes may be used in giving the name of the apparatus.

13. Recording Agency

Use here the code given in Appendix 3.K. If the recording agent is the TNO consult the TNO for an identification number. The first digit of that number is the code number for the recording agency.

14. Recording Individual

Fill in the last 2 digits of the number given as identification number.

15. Year of Recording or Modification

Give the last 2 digits of the year, e.g. 75 for 1975.

16. Material Handled

One records here the most significant material handled in the installation or apparatus. This is done even if these materials are not re-emitted, such as would be the case for natural gas used in a boiler installation. Since this data is not included in the computer card format, it does not have to be recorded in boxes.

2.4 AIR POLLUTION SOURCES COMPONENT

A source of air pollution is defined as an orifice through which an effluent passes and includes the entire area covered by an installation when it is a question of the leakages through all the flanges of an installation. In contrast to the general usage of the word, a source is not the case of the effluent. The cause is the installation or the apparatus.

Sources can be differentiated into the categories given in Appendix 3.L. All sources of air pollution within a plant can be numbered, preferentially consecutively and beginning with 001.

It can also happen that a source is so large that it is located in 2 or more sectors of the topographical map. This would be the case for large storage areas. In that case the source whould be segregated into parts which each lie within 1 sq. km. area of the map. Each part would then be recorded as a separate source.

Smaller (less significant) sources of the same type which are situated very close to one another can be considered to be one source. The sum of the individual areas is recorded as the area of that source.

The following rules hold for the completion of the questionnaire forms:

1. Card Code

For the Air Pollution Source Component the code is 39004.

2. Type of Modification

If the data to be recorded is new, fill in the value 1. If it is a modification of existing data, fill in the value 2. If data must be removed from the file, fill in the value 3.

For modifications re-record all data. For removal of data complete points 1 to 4 only.

3. Plant Number

Give the plant number assigned to the plant in the Plant Component.

4. **Source Number**

Number all sources of air pollution in the plant beginning with 001. Use preferentially a consecutive numbering scheme. Watch out for duplications and submit if possible a list of the source numbers.

Make sure that large sources (such as storage yards) which are located in 2 or more sectors of the topographical map have been divided up into parts each of which lie in a 1 km^2 of the map.

5. **Kind of Source**

Use the codes given in Appendix 3.L to characterize the kind of source.

6. **Name**

Record the name used in the plant to refer to the source. Use a maximum of 20 letters, digits, punctuation marks and spaces for this. Be as specific as possible in order to produce a unique identification. Use, if necessary, (recognizable) abbreviations.

7. **Location**

Identify the sector on the topographical map in which the source is located. Determine the values of the horizontal and vertical axes of the lower left hand corner and record these under "hor. km." and "vert. km.". Locate by measurements on the topographical map or on the ground plan of the plant the location of the centre of the source in units of tens of meters from the corner located above.

8. **Geodesic Height**

Look in the topographical map for the geodesic height of the terrain at the location of the source. Add 10 m and record the result on the data form. Make sure that all boxes have been filled in either with a digit or with zeros.

Example: - 5 m = 005
15 m = 025

9. **Geometric Height**

Give the height of the source above ground in meters.

Example: 20 m = 020

10. Surface Area

Determine the surface area of the source, i.e. of the orifice through which the effluent passes into the environment. For effluents from buildings exiting through open windows and doors this is the total surface area of these openings. Express the surface area in mm^2 and report the result in terms of a mantissa and exponent. Arrange the result so that the exponent has only the values 0,3,6, or 9. Thus 250×10^5 mm^2 would be written with a mantissa 0025 and exponent 6. For sources with other than a vertical streaming, the reporting of the order of magnitude is sufficient. Always check carefully the correctness of the value of the exponent since an error there always leads to severe errors.

If a number of effluents (as a result of the combined leakages from an installation) are reported (such as the effluents resulting from all the leakages through the flange plates of an installation or part thereof), then the source area must be reported as the projected surface area.

11. Municipality

Give the number of the municipality in which the source is located. Use the municipal codes given in Appendix 3.C.

12. Recording Agency

Use the codes in Appendix 3.K for this. If the recording agency is the TNO, one should obtain an identification number. The first digit of this number is the code number for the recording agency.

13. Recording Individual

Give the last 2 digits of the identification number.

14. Year of Recording or Modification

Give the last 2 digits of the year, i.e. 75 for 1975.

2.5 WATER POLLUTION SOURCES COMPONENT

Sources of water pollution are defined as orifices through which discharges of waste water occur. These discharges can take place directly into the environment such as directly into the surface level watercourses or through seepage into the ground, or indirectly into the environment such as through sewage systems and/or water purification installations. The various possibilities have all been listed in Appendix 3.M.

Discharge of liquid or solid wastes into an adjacent surface level watercourse (not into the North Sea) would also be recorded as an effluent leading to water pollution. This is a direct discharge with a "kinds of sources" number of 1 or 2.

For a given plant all sources of water pollution, direct as well as indirect sources, must be numbered, preferably consecutively, beginning with 01.

The following rules apply for the completion of the questionnaire forms:

1. Card Code

   For the Water Pollution Sources Component the code number is 39006.

2. Type of Modification

   If the data to be recorded is new, fill in the value 1. If it is a modification of existing data, fill in the value 2. If data must be removed from the file, fill in the value 3.

   For modifications re-record all data. For removal of data complete points 1 to 4 only.

3. Plant Number

   Give the plant number assigned to the plant in the Plant Component.

4. Source Number

   Label all sources of water pollution (direct as well as indirect) in the plant, preferably consecutively, beginning with 01. Watch out for duplication.

5. Kinds of Sources

   Use the codes in Appendix 3.M to characterize the source.

6. Name

Record the name of the source as used in the plant. Use a maximum of 20 letters, digits, punctuation marks and spaces. Be as specific as possible in order to avoid a misidentification. If necessary, use recognizable abbreviations.

7. Location

Find from the topographical map the sector in which the source (discharge point) is located. Determine the values of the horizontal and vertical axes of the lower left hand corner of this sector and record these numbers under "hor. km." and "vert. km.". By measurements on the topographical map or on the ground plan of the plant,determine the position of the source in tens of meters from the point dertemined above. In the cases of direct discharge (code numbers 1 to 4 in Appendix 3.M) this location is given as the location of the discharge into the environment, i.e. into the surface level watercources, or into the ground. In cases of so-called secondary discharges (Kinds of Sources number 2) the location is given where the minor (not mentioned in Appendix 3.O) watercourse enters a surface level watercourse that is indeed named in the list of codes in Appendix 3.O. Should the minor surface level watercourse discharge into more than one major surface level water course,refer to the instructions given under point 9 on page 26. In cases where dumping of wastes takes place into surface level watercourses, the location of the dump is given.
For indirect discharges into installations outside the plant (code numbers 5, 6 and 8 in Appendix 3.M) the place or the approximate place at the which the waste water leaves the plant's terrain should be given. For indirect discharges into other installations in the same plant,the location of the installation which receives the waste water should be given.

8. Purification Jurisdiction

Should direct discharges occur into a watercourse not regulated by the federal government (refer to the list of surface level watercourses in Appendix 3.O) or should indirect discharges occur into an installation of a purification jurisdiction (e.g. a transporting line or a purification installation), report here the name of the purification jurisdiction (or the equivalent water control agency). Use the code lists in Appendix 3.N. If it should be a question of indirect discharge into another installation than those under the direct control of a purification jurisdiction or of a direct discharge into a federally controlled watercourse, report here the value 00.

9. **Collecting Surface Level Watercourses**

Should it be a question of a direct discharge into a surface level watercourse, give here the name of the lake, canal, river or brook into which the discharge occurs. Use the code lists in Appendix 3.0. For discharges which do not occur into surface level watercourses, fill in the value 0000.

In the case of a so-called secondary discharge (Kinds of Sources code number 2) it may occur that the minor watercourse not mentioned in Appendix 3.0 feeds into two or more listed major surface level watercourses. This presents no problem if there is a preferential current direction in the minor surface level watercourse. Should the current direction vary in time, then all the listed surface level water courses mentioned in Appendix 3.0 could be specified as the collecting surface level watercourse. In that case one should record that watercourse which lies at the closest distance measured (over the length of the minor watercourse) from the point of discharge into the minor (not mentioned in Appendix 3.0) watercourse.

10. **Destination**

For direct discharges fill in with zeros. For indirect discharges into an installation inside or outside the plant itself, record here the plant number and the installation number of the place of destination. If this is a water purification installation with the plant itself, then the plant code number of the plant and the installation number of the water purification installation is recorded. If it is a municipal sewage or other public utility installation, then these numbers can be obtained from the project directorate. Submit to the project directorate the name of the municipality in which the sewage (or other installation) system is located as well as the co-ordinates of the source. If the discharge goes to another plant, the numbers are also obtainable from the project directorate.

11. **Municipality**

Give here the municipality in which the source is situated. Use the codes in Appendix 3.C.

12. Recording Agency

Use here the codes in Appendix 3.K. If the recording agency is the TNO, request an identification number. The first digit of the number given is the code number for the recording agency.

13. Recording Individual

Give here the last 2 digits of the identification number.

14. Year of Recording or Modification

Give here the last 2 digits of the year, e.g. 75 for 1975.

2.6 AIR POLLUTION EFFLUENTS COMPONENT

Refer first to Appendix 4, para. 4.1 for instructions for the recording of effluents.

All independent effluents or series of periodically occurring effluents must, as far as determinable, be recorded on separate questionnaire forms. Also whenever a number of different kinds of material are released simultaneously, such as CO, SO_2, and NO_2 in combustion gases, each of these kinds of effluents must have their own questionnaire form.

Gas and oil-fired installations for heating normally work in an on-off cycle. During the heating season (these are the months 11 through 4 if only annual figures are known) and during week days, they can be considered to be continuously emitting (e.g. 21 days/month, 24 hours/day; in the months 11 through 4 from Monday to Friday, from 0 to 24 hours). The on and off nature is to be disregarded for the cases of "percentage of nominal capacity" (refer to point 10 below). This latter is to be estimated from data on the nominal capacity, consumption of fuel, number of firing hours, efficiency and the heating coefficient of the fuel.

For radically intermittent procedures, such as often occurs with lathe work, welding, milling and cutting work a similar method to that for furnaces with an off-on cycle may be used.

In general, effluents arising from leakages of flanges need not be recorded because of their relative insignificance. They must be recorded in the cases of extremely toxic or odourous material. Consultations should be made with the local authorities.

The following rules hold for the completion of the questionnaire forms:

1. Card Code

For the Air Pollution Effluents Component the code number is 39005.

2. Type of Modification

If the data to be recorded is new, fill in the value 1. If it is a modification of existing data, fill in the value 2. If data must be removed from the file, fill in the value 3.

For modifications re-submit all data. For removal of data complete points 1 to 7 and point 27.

3. Plant Number

Give the plant number assigned to the plant in the Plant Component.

4. Installation Number

Give the number of the installation which causes the effluent, or to which the apparatus which causes the effluent belongs.

5. Apparatus Number

Give the number of the apparatus which causes the effluent. Should the cause be an entire installation give the value 00.

5a. Name of the Process

Record the name of the process which gives rise to the effluent in question. This information is valuable if more than one process occurs during the year in an installation. This information is not fed into the computer, so that no "boxes" have been given on the questionnaire form.

For large plants it is advisable to record here also the name of the installation and of the apparatus. This will simplify later discussions on the recording of its operation.

6. Source Number

Give the number of the source which releases the effluent from the plant and through which it enters the open air.

7/8. Material Number and Material Grouping

Give the code numbers of the material emitted. These are found in the matter code lists. Should they not be located in the lists, consult the project directorate. Consult the project directorate also if some type of material occurs in the lists but without its chemical formula; this could lead to possible confusion. Take care that the material number and the material grouping are always coupled to one another and that the separation of material into material groupings may only be done by the project directorate.

Effluents of water vapour are recorded only if they are extensive (e.g. for cooling towers and cooling basins).

It should be noted here that mixtures of chemical compounds can also be included in the Matter Component as one type of material. The composition of it does not have to be exactly known provided that it is characteristic for the production process in question. Such material should be included in the material groupings after consultation with the project directorate.

9. Form of the Effluent

Use the code list in Appendix 3.P for this.

10. Capacity

By capacity one means that capacity at which the installation (or apparatus) works when the effluent recorded in point 11 occurs (i.e. during the process mentioned in point 5a). The capacity is expressed in tens of percent of the nominal capacity recorded in point 9 of the data form for the Installation and Apparatus Component. Therefore, 05 means that the installation (or apparatus) is operating at 50% of its nominal capacity during the time that effluent is being released.

For gas and oil-fired boiler installations there is the question of the on-off nature of the process, so that in fact the capacity varies between 0 and 100%. For these installations, therefore, one gives the percentage of the time that the installation is in operation. This can be estimated from the capacity and the fuel comsumption of the boiler.

11. Mass Flow

Refer to Appendix 4, para 4.1 for instructions pertaining to the recording of effluents. Record here the mass flow of these effluents during the period(s) registered in points 19, 20 and 21. Make sure that the mass flow recorded is that which remains after any gas cleaning and that, as far as the determination of the mass flow is concerned, the material in question consists entirely of that type which is contained in a given listing in the Matter Component (in general water of crystallization has been neglected).

For the recording of the effluents from a collection of several similar installations or apparati which occur in the Installation and Apparatus Component under a single code number, the the sum of the effluents produced by them is recorded.

The mass flow is expressed in mg/h. Use the notation of mantissa and exponent. The exponent may only have the values 0, 3, 6 and 9. Thus a mass flow of 250 x 10^5 mg/h must be recorded with a mantissa 0025 and exponent 6. Check carefully the exponent given, since incorrect values there lead to severe errors. For furnace installations give a report next to the boxes of the nature and quantity of fuel consumed.

12. Variation in the Mass Flow

Record here in percent the estimated variation in the mass flow (given in point 11) during the time that the effluent is occuring. Refer to Appendix 4, para. 4.2 for instructions on the calculation of this variation. For boiler installations operating on an on-off cycle give the value as 99%.

13. Volume Flow

In those situations where there is no vertical flow of effluents such as would occur from orifices as the extremity of a chimney, pipe or cooling tower, the values 0000 and 0 should be recorded.

For cases where there is a certainty of a vertical flow, calculate the total volume flow which is emitted by the source through which the effluent leaves the plant using the same conditions as given in point 12 for the mass flow. Make sure that the total volume flow leaving the source has been considered and not only that component for which the questionnaire has been prepared. Calculate the value of the volume flow at 0^oC and one atm pressure and express the result in cm^3/h. Recording again occurs using a mantissa and exponent and care must be taken to record only exponent values of 0, 3, 6 or 9. Check carefully the value of this exponent since errors here will give rise to serious mistakes.

14. Variation in the Volume Flow

Record here in percent the estimated variation in the volume flow given in point 13 during the time that the effluent is present. Refer to Appendix 4, para. 4.2 for instructions on the calculation of this variation. For boiler installations with an on-off cycle record the value 99%.

15. **Expected Mass Flow**

Record here the amount of effluent that the plant expects will be produced during a 3-year period (see point 12). Use the code list in Appendix 3.Q.

16. **Expected Volume Flow**

Record here the total volume flow that the plant expects will be produced during a 3-year period (see point 13). Use the code list in Appendix 3.Q.

17. **Temperature**

Record here the temperature in °C at which the total gas flow leaves the source. Take account of any cooling that might occur in a tall chimney.

18. **Means of Producing Effluent**

This quantity gives a more precise determination of the cause of the effluent. Use the code list in Appendix 3.R.

19. **Frequency**

The determination of the time during which the effluent occurs is accomplished in the first instance by means of a frequency and a length of time. One should attempt to do this in a reasonable fashion so that not too many questionnaire forms will have to be completed.

The frequency units given in the code list in Appendix 3.S should be used. (e.g. 03 3 = 3 times per day). For a continuous effluent during the entire year one can use the code 0 for the "units" 1). To translate days/week into days/month, use the following table:

1	day(s)	/	week	=	4	days	/	month
2	"	"	"	=	9	"	"	"
3	"	"	"	=	13	"	"	"
4	"	"	"	=	17	"	"	"
5	"	"	"	=	21	"	"	"
6	"	"	"	=	26	"	"	"
7	"	"	"	=	30	"	"	"

---

1) If an effluent has been recorded as being "continuous" this will be interpreted by the computer as being 8000 hours/year. The remaining 736 hours will be considered to be the time during which the installation is not normally in operation because of vacations, shut-downs, start-ups, cleaning, etc.

20. **Length of Time**

Here the length of the period(s) of time is given during which the effluents occur with the frequency reported in 19. For the applicable units refer to the codes in Appendix 3.T (e.g. 02 2 = during 2 minutes). Make sure that the recorded length of time always refers to a continuous period of emission of effluent. It is an error to record a time that must be further qualified with the help of the "period of time" (see point 21).

21. **Period of Time**

Here is recorded the period of time during which the effluent, recorded in points 19 and 20 as to frequency and length of time, occurs or can occur. One considers here the months of the year, the days of the week (Monday = 1, Sunday = 7), and the hours of the day. Note that the length of time and the period of time are not necessarily identical. Take, for instance, an effluent which occurs for one hour. It can be that one knows this hour lies between 16 and 17 hr, but it might also be that one knows it only occurs between 08 and 17 hr. For the first case one gives the length of time and the period of time (in hours) as "01 3" and "16 to 17" respectively while in the last case it is "01 3" and "08 to 17".

Note also that only the value " 0 to 24 hr" (i.e. 00 - 24) can be given for the period of time if the length of time in point 19 has been expressed in days. Then it does not make sense to speak about hours of operation. Also only the values " 0 to 24 hr" and "Monday to Friday" (i.e. 1 - 7) can be recorded if the length of time in point 19 is given in months. In these cases the periods in question can be left blank.

Here are a few examples of the periods of time:

0102
15 = in January and February, from Monday to Friday, from 8.00 to 16.00 hr
0816

0505
33 = in May, on Wednesday, from 10.00 to 12.00
1012

22. **Kinds of Gas Cleaning**

Use the codes in Appendix 3.U to indicate the kinds of gas cleaning, if any, that occurs just before the effluent is released into the environment.

23. Efficiency

An approximation of the efficiency of the gas purification system is given for the material reported in point 7. This is done in units of 0.1%. An efficiency of 95% would then be recorded as 950.

24. Recording Agency

Use the code list in Appendix 3.K. Should the recording agency be the TNO, use the first digit of the number given as identification number.

25. Recording Individual

Record here the last 2 digits of the identification number.

26. Details of the Measurement

Here one gives an indication of the type (accuracy and agency) of measurement carried out on the nature and magnitude of the effluent. Use the code lists in Appendix 3.V (e.g. 23 = a rough measurement by the TNO). Any calculation of the effluent using emission factors must be recorded as an estimation.

27. Continuation Number

In the cases of modification or of removal of existing data, the continuation number must be included. This number was given by the computer to the data card which is now to be modified.

28. Year of Recording or Modification

Give here the last 2 digits for the year, e.g. 75 for 1975.

2.7 WATER POLLUTION EFFLUENTS COMPONENT

Refer first to Appendix 4, para 4.1 for instructions as to the recording of effluents.

For waste water, as well, all effluents which can be considered independent, as far as that can be determined, should be recorded on their own questionnaire form.

For the recording of water effluents one takes account of direct discharges into the environment as well as indirect discharges, i.e. as into other installations within or outside the plant itself, such as to one's own water purification installation or to a municipal sewage system.

All emitted material should be recorded as "real matter" if at all possible. If only the COD, Kjeldahl-nitrogen and precipitative matter of oxygen-containing compounds are known, these values may be recorded instead of "real matter". One should take care that one does not double-count in those cases where one does know the effluent of some "real matter" but at the same time its values have been included in an overall COD number, Kjeldahl-nitrogen number, and precipitative matters results.

For acids, bases and salts, sometimes only the effluent is known in terms of its ionic content and the anion is not known. For those cases one can record the material under consideration as ions.

The recording of heat in cooling or waste water should be made only if its value is larger than 0.5 MW per source. This heat is recorded as heat directly into the water from the plant. The result is expressed in Watts.

The following rules should be followed for the completion of the questionnaire forms and for the computer card format:

1. Card Code

   For the Water Pollution Effluents Component the code is 39007.

2. Type of Modification

   If the data to be recorded is new, fill in the value 1. If it is a modification of existing data, fill in the value 2. If data must be removed from the file, fill in the value 3.

   For modifications re-submit all data. For removal of data complete points 1 to 6 and point 25.

3. **Plant Number**

   Give the plant number assigned to the plant in the Plant Component.

4. **Installation Number**

   Give the number of the installation or of the installation belonging to the apparatus that produces the effluent.

5. **Apparatus Number**

   Give the number of the apparatus that produces the effluent. If the effluent is produced by an installation give the value 00.

5a. **Name of the Process**

   Record the name of the process which produces the effluent in question. This information is especially important if more than one process takes place in the installation during the course of the year. Since this information is not put into the computer, no boxes are given for it on the data sheets.
   For large plants one should record also the name of the installation and of the apparatus. This will make later discussions over the data sheets simpler.

6. **Source Number**

   Record the number of the source through which the waste water is released into the environment or into another installation.

7/8. **Material Number and Material Grouping**

   Record the numbers belonging to the emitted material. These code numbers are found in the matter code lists. Should they not be found there, consult the project directorate. Consult the project directorate if a type of matter with no chemical formula occurs in the lists; this will avoid any misunderstanding. Make sure that the material number and the material grouping are always coupled and that any division of material into material groupings may only be done by the project directorate.

   Four types of material are differentiated in the case of the recording of water effluents:

   a. real matter. These are chemicals, chemical compounds or combinations of compounds (refer to point 7/8 of para 2.6 for a discussion of mixtures). As far as possible all these types of material should be recorded.
   b. Should the recording of compounds which combine with oxygen not be possible under the heading real matter, then the recording of the COD, Kjeldahl-

nitrogen and precipitative matter will be permitted.

c. Should the recording of acids, salts and bases as such not be possible, then the recording of ions will be permitted.

d. heat. This concerns the amount of heat in the cooling water and, if relevant, in the waste water. Heat effluents are recorded only if they have a heat content greater than 0.5 MW per source.

In the case of water softeners and demineralizers it is not sufficient to only record the chemicals released into the environment, but one must also take account of any minerals, present in the collecting watercourses, which were themselves released as effluents into the environment.

The effluents of sanitary facilities in a plant are not to be recorded.

9. Form of the Effluent

Use the code list in Appendix 3.W.

10. Capacity

By capacity one means that capacity at which the installation or apparatus is operating when the effluent occurs (i.e. during the process named in point 5a). The capacity is expressed in tens of percent of the nominal capacity recorded in point 9 of the data sheets for the Installation and Apparatus Component. Thus 05 means that the installation (or apparatus) was operating at 50% of its nominal capacity during the period when the effluent was produced.

11. Mass Flow or Heat Flow

Refer to Appendix 4, para. 4.1 for instructions pertaining to the recording of effluents. Record here the mass flow during the recording periods in points 18, 19 and 20 for these effluents. Make sure that the mass flow that is recorded is that flow that remains after any waste water purification, recorded in point 21, has occurred, and that for the determination of the mass flow consideration is given to the fact that the matter in question has consisted of 100% of that matter given by the Matter Component code number (in general one does not include the water of crystallization in the formula).

In those cases where the effluent has been recorded from a collection of several installations or apparati labelled in the Installation and Apparatus Component under a single number, the sum of the effluents produced by them must be recorded.

Express the mass flow of "real matter", COD and Kjeldahl-nitrogen in mg/h. Precipitative matter is expressed in ml/h. If heat is released, then record the heat released into the watercourses in Watts.
Use the notation of mantissa and exponent, where the exponent is restricted to the values 0, 3, 6, and 9. A mass flow of 250×10^5 must be recorded with a mantissa of 0025 and an exponent 6. Check carefully the value of the exponent since incorrect results lead to serious errors.

12. Variation in the Mass or Heat Flow

Record here in percent the estimated variation in the mass and heat flow, referred to in point 11, during the time that the effluent is being released. Refer to Appendix 4, para. 4.1 for instructions pertaining to the calculation of this variation.

13. Expected Mass or Heat Flow

Record here the amount of effluent that the plant expects will be released during a 3-year period. Use the code list in Appendix 3.Q.

14. Volume Flow

Record here the amount of effluent of waste water released by the installation or apparatus in l/h
In many cases the volume flow per installation or apparatus will be unknown but instead a sum of the volume flows to one source. One should then attempt, as far as possible, to segregate the total flow over the various installations and apparati. One should report on the data sheets how this division took place. The volume flow should also be expressed with a mantissa and exponent. Make sure that the exponent is correctly recorded.

15. Variation in the Volume Flow

Record here in percent the estimated variation in the volume flow, referred to in point 14, during the time that the effluent is being released. Refer to Appendix 4, para. 4.1 for instructions pertaining to the calculation of this variation.

16. Expected Volume Flow

Record here the magnitude of the volume flow that the plant expects will be released in a 3-year period. Use the code list in Appendix 3.Q.

17. **Means of Producing Effluent**

Use here the code list in Appendix 3.R.

18. **Frequency**

Refer to the instructions in point 19 of the Air Pollution Effluents Component.

19. **Length of Time**

Refer to the instructions in point 20 of the Air Pollution Effluents Component.

20. **Period of Time**

Refer to the instructions in point 21 of the Air Pollution Effluents Component.

21. **Type of Water Purification**

Should the water purification apparatus not need to be considered as a separate installation (refer to the introduction to para. 2.3 point e) then the nature of the apparatus should be given here. Use the code list in Appendix 3.X.

22. **Efficiency**

One records here an approximation of the efficiency of the water purification apparatus for the kind of matter named in point 7. This is done in units of 0.1%. Thus an efficiency of 95% is recorded as 950.

23. **Recording Agency**

Use the code list in Appendix 3.K. If the recording agency is the TNO, record the first digit of the identification number.

24. **Recording Individual**

Give the last 2 digits of the identification number.

25. **Details of the Measurement**

Here one gives an indication of the type (accuracy and agency) of the measurement carried out on the nature and magnitude of the effluent. Use the code lists in Appendix 3.V (e.g. 23 = a rough measurement by the TNO). Any calculation of the effluent using emission factors must be recorded as an estimation.

26. **Continuation Number**

In the cases of modification or of removal of existing data, the continuation number must be included. This number was given by the computer to the data card which is now to be modified.

28. **Year of Recording or Modification**

give here the last 2 digits for the year, e.g. 75 for 1975.

APPENDIX 1

Questionnaire forms

APPENDIX 2

Computer Card Format for the Matter Component

Vertrouwelijk. Alleen voor personeel aangewezen
volgens ERL-regels. Geen basis voor heffingen.

1 - 2

EMISSIEREGISTRATIE

Paraaf teamleider:

Datum:

Bedrijvenbestand

1-5	1. Kaartcode	▪	3 9 0 0 1
6	2. Mutatiesoort (A)	▪	☐
7-12	3. Bedrijfsnummer	▪	☐☐☐☐☐☐
13-15	4. Bedrijfstak (B)	▪	☐☐☐
16-45	5. Naam		☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
46-66	6. Adres		☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
67-86	7. Woonplaats		☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐
87-91	8. Aantal werknemers		☐☐☐☐☐
92-94	9. Gemeente (C)	▪	☐☐☐
95-96	10. Provincie (D)	▪	☐☐
97	11. Toezicht lucht (E)	▪	☐
98	12. Toezicht water (F)	▪	☐
99-100	13. Jaar v. opn. of mut.	▪	☐☐
	14. Contactpersoon + tel. nr.		

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EMMISION REGISTRY

Initials of group leader:
Date:

Plant Component

1. Card Code
2. Type of Modification (A)
3. Plant Number
4. Plant Function (B)
5. Name
6. Address
7. District
8. Number of Employees
9. Municipality (C)
10. Province (D)
11. Control on the Air Quality (E)
12. Control on the Water Quality (F)
13. Year of Recording or Modification
14. Contact Person in the Plant and telephone number

februari 1976

volgens ERL-regels. Geen basis voor heffingen.

EMISSIEREGISTRATIE

Paraaf teamleider:

Datum:

Installatie- en apparatenbestand

1-5	1. Kaartcode	■	3 9 0 0 3	1. Card Code
6	2. Mutatiesoort (A)	■	☐	2. Type of Modification (A)
7-12	3. Bedrijfsnummer	■	☐☐☐☐☐☐	3. Plant Number
13-15	4. Installatienummer	■	☐☐☐	4. Installation Number
16-17	5. Apparaatnummer	■	☐☐	5. Apparatus Number
18-19	6. Aantal install./app.		☐☐	6. Number of Installations and/or Apparati
20-23	7. Installatiesoort (H)	■	☐☐☐☐	7. Kind of Installation (H)
24-27	8. Apparaatsoort (I)	■	☐☐☐☐	8. Kind of Apparatus (I)
	9. Nominale capaciteit			9. Nominal Capacity
28-31	mantisse		☐☐☐☐	mantissa
32	exponent		☐	exponent
33	10. Eenheid v. cap. (J)		☐	10. Units of Capacity (J)
34-36	11. Ligging, hor. km		☐☐☐	11. Location, hor. km.
37-38	10 m		☐☐	10 m
39-41	vert. km		☐☐☐	vert. km.
42-43	10 m		☐☐	10 m
44-75	12. Naam		☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐	12. Name
76	13. Opname-instantie (K)	■	☐	13. Recording Agency (K)
77-78	14. Opname-persoon	■	☐☐	14. Recording Individual
79-80	15. Jaar v. opn. of mut.	■	☐☐	15. Year of Recording or Modification
	16. Gehanteerde stoffen			16. Material Handled

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EFFLUENTS REGISTRY

Initials of group leader:

Installation and Apparatus Component

Date:

volgens ERL-regels. Geen basis voor heffingen.

EMISSIEREGISTRATIE

Paraaf teamleider:

Datum:

Bronnenbestand lucht

1-5	1. Kaartcode	• 3 9 0 0 4	1. Card Code
6	2. Mutatiesoort (A)	• ☐	2. Type of Modification (A)
7-12	3. Bedrijfsnummer	• ☐☐☐☐☐☐	3. Plant Number
13-15	4. Bronnummer	• ☐☐☐	4. Source Number
16	5. Bronsoort (L)	• ☐	5. Kind of Source 6. Name
17-36	6. Naam	☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐	
37-39	7. Ligging, hor. km	• ☐☐☐	7. Location, hor. km.
40-41	10 m	• ☐☐	10 m
42-44	vert. km	• ☐☐☐	vert. km.
45-46	10 m	• ☐☐	10 m
47-49	8. Geod. hoogte (m)+10 m	• ☐☐☐	8. Geodesic Height (m) + 10 m
50-52	9. Geom. hoogte (m)	• ☐☐☐	9. Geometric Height (m)
	10. Oppervlak (mm^2)		10. Surface Area (mm^2)
53-56	mantisse	• ☐☐☐☐	mantissa
57	exponent	• ☐	exponent
58-60	11. Gemeente (C)	• ☐☐☐	11. Municipality (C)
61	12. Opname-instantie (K)	• ☐	12. Recording Agency (K)
62-63	13. Opname-persoon	• ☐☐	13. Recording Individual
64-65	14. Jaar v. opn. of mut.	• ☐☐	14. Year of Recording or Modification

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EFFLUENTS REGISTRY

Air Pollution Sources Component

Initials of group leader:

Date:

februari 1976

Vertrouwelijk. Alleen voor personeel aangewezen volgens ERL-regels. Geen basis voor heffingen.

1 - 5

EMISSIEREGISTRATIE

Paraaf teamleider:

Datum:

Bronnenbestand water

1-5	1. Kaartcode	3 9 0 0 6	1. Card Code
6	2. Mutatiesoort (A)	☐	2. Type of Modification (A)
7-12	3. Bedrijfsnummer	☐☐☐☐☐☐	3. Plant Number
13-14	4. Bronnummer	☐☐	4. Source Number
15	5. Bronsoort (M)	☐	5. Kind of Source (M) 6. Name
16-35	6. Naam	☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐☐	
36-38	7. Ligging, hor. km	☐☐☐	7. Location, hor. km.
39-40	10 m	☐☐	10 m
41-43	vert. km	☐☐☐	vert. km.
44-45	10 m	☐☐	10 m
46-47	8. Zuiveringschap (N)	☐☐	8. Purification Jurisdiction (N)
48-51	9. Ontv. oppervl. water (O)	☐☐☐☐	9. Collecting Surface Level Watercourses (O)
	10. Bestemming		10. Destination
52-57	bedrijfsnummer	☐☐☐☐☐☐	plant number
58-60	installatienummer	☐☐☐	installation number
61-63	11. Gemeente (C)	☐☐☐	11. Municipality (C)
64	12. Opname-instantie (K)	☐	12. Recording Agency (K)
65-66	13. Opname-persoon	☐☐	13. Recording Individual
67-68	14. Jaar v. opn. of mut.	☐☐	14. Year of Recording or Modification

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EFFLUENTS REGISTRY

Initials of group leader:

Water Pollution Sources Component

Date:

februari 1976

EMISSIEREGISTRATIE
EFFLUENTS REGISTRY

Paraaf teamleider:
(Initials of group leader:)
Datum:
(Date:)

Emissiebestand lucht (Air Pollution Effluents Component)

1-5	1. Kaartcode	* 3 9 0 0 5	1. Card Code	
6	2. Mutatiesoort (A)	* ☐	2. Type of Modification (A)	[redacted]
7-12	3. Bedrijfsnummer	* ☐☐☐☐☐☐	3. Plant Number	
13-15	4. Installatienummer	* ☐☐☐	4. Installation Number	[redacted]
16-17	5. Apparaatnummer	* ☐☐	5. Apparatus Number	[redacted]
	5a. Naam v.h. proces		5a. Name of the Process	
18-20	6. Bronnummer	* ☐☐☐	6. Source Number	
21-24	7. Stofnummer	* ☐☐☐☐	7. Material Number	
25-26	8. Stofgroep	* ☐☐	8. Material Grouping	
27	9. Emissievorm (P)	* ☐	9. Form of the Effluent (P)	
28-29	10. Capaciteit (10%)	☐☐	10. Capacity (10%)	
30-33	11. Massastroom, mantisse	* ☐☐☐☐	11. Mass Flow, mantissa	
34	(mg/h) exponent	* ☐	(mg/h) exponent	
35-36	12. Spreiding massastr. (%)	☐☐	12. Variation in the Mass Flow (%)	
37-40	13. Volumestroom, mantisse	* ☐☐☐☐	13. Volume Flow, mantissa	
41	(cm^3/h) exponent	* ☐	(cm^3/h) exponent	
42-43	14. Spreiding volumestr. (%)	☐☐	14. Variation in the Volume Flow (%)	
44	15. Verwachte massastr. (Q)	* ☐	15. Expected Mass Flow (Q)	
45	16. Verwachte volumestr. (Q)	* ☐	16. Expected Volume Flow (Q)	
46-48	17. Temperatuur (°C)	* ☐☐☐	17. Temperature (°C)	
49-50	18. Emissiemodus (R)	* ☐☐	18. Means of Producing Effluent (R)	
51-52	19. Frequentie, waarde	☐☐	19. Frequency, value	
53	eenh. (S)	* ☐	units (S)	
54-55	20. Tijdsduur, waarde	☐☐	20. Length of Time, value	
56	eenh. (T)	☐	units (T)	
57-60	21. Tijdsopgave, maand	☐☐ t/m ☐☐	21. Period of Time, month	
61-62	dag	☐ t/m ☐	day	
63-66	uur	☐☐ tot ☐☐	hour	
67-68	22. Type gasreiniging (U)	☐☐	22. Kinds of Gas Cleaning (U)	
69-71	23. Rendement gasr. (0,1%)	☐☐☐	23. Efficiency of Gas Cleaning (0.1%)	
72	24. Opname-instantie (K)	* ☐	24. Recording Agency (K)	
73-74	25. Opname-persoon	* ☐☐	25. Recording Individual	
75-76	26. Soort bepaling (V)	* ☐☐	26. Details of the Measurement (V)	
77	27. Volgnummer	☐	27. Continuation Number	
78-79	28. Jaar v. opn. of mut.	* ☐☐	28. Year of Recording or Modification	

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1 - 7

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EMISSIEREGISTRATIE

(EFFLUENTS REGISTRY)

Paraaf teamleider:
(Initials of group leader:)
Datum:
(Date:)

Emissiebestand water (Water Pollution Effluents Component)

1-5	1. Kaartcode	*	3 9 0 0 7	1. Card Code	
6	2. Mutatiesoort (A)	*	☐	2. Type of Modification (A)	[redacted]
7-12	3. Bedrijfsnummer	*	☐☐☐☐☐☐	3. Plant Number	
13-15	4. Installatienummer	*	☐☐☐	4. Installation Number	
16-17	5. Apparaatnummer	*	☐☐	5. Apparatus Number	
	5a. Naam v.h. proces			5a. Name of the Process	[redacted]
18-19	6. Bronnummer	*	☐☐	6. Source Number	
20-23	7. Stofnummer	*	☐☐☐☐	7. Material Number	[redacted]
24-25	8. Stofgroep	*	☐☐	8. Material Grouping	
26	9. Emissievorm (W)	*	☐	9. Form of the Effluent (W)	
27-28	10. Capaciteit (10%)		☐☐	10. Capacity (10%)	
	11. Massa-of warmtestroom (mg/h, ml/h of Watt),			11. Mass Flow or Heat Flow (mg/h,ml/h or Watt),	
29-32	mantisse	*	☐☐☐☐	mantissa	
33	exponent	*	☐	exponent	
34-35	12. Spreiding massa- of warmtestroom (%)		☐☐	12. Variation in the Mass Flow or Heat Flow (%)	
36	13. Verwachte massa- of warmtestroom (Q)	*	☐	13. Expected Mass Flow or Heat Flow (Q)	
37-40	14. Volumestroom, mantisse	*	☐☐☐☐	14. Volume Flow, mantissa	
41	(1/h) exponent	*	☐	(1/h) exponent	
42-43	15. Spreiding vol. stroom (%)		☐☐	15. Variation in the Volume Flow (%)	
44	16. Verwachte vol. stroom (Q)	*	☐	16. Expected Volume Flow (Q)	
45-46	17. Emissiemodus (R)	*	☐☐	17. Means of Producing Effluent (R)	
47-48	18. Frequentie, waarde		☐☐	18. Frequency, value	
49	eenh. (S)	*	☐	units (S)	
50-51	19. Tijdsduur, waarde		☐☐	19. Length of Time, value	
52	eenh. (T)		☐	units (T)	
53-56	20. Tijdsopgave, maand		☐☐ t/m ☐☐	20. Period of Time, month	
57-58	dag		☐ t/m ☐	day	
59-62	uur		☐☐ tot ☐☐	hour	
63-64	21. Type waterzuivering (X)		☐☐	21. Type of Water Purification (X)	
65-67	22. Rendement water z. (0,1%)		☐☐.☐	22. Efficiency of Water Purification (0.1%)	
68	23. Opname-instantie (K)	*	☐	23. Recording Agency (K)	
69-70	24. Opname-persoon	*	☐☐	24. Recording Individual	
71-72	25. Soort bepaling (V)	*	☐☐	25. Details on the Measurement (V)	
73	26. Volgnummer		☐	26. Continuation Number	
75	27. Jaar v. opn. of mut.	*	☐☐	27. Year of Recording or Modification	

februari 1976

ERL (EMMISION REGISTRY)

Stoffenbestand
(MATTER COMPONENT)

Blad nr.
Page No.

1*	2*	3*	4*	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20*
kaart code	mutatiesoort	stof. nummer	stofgroep	verontreinigend	stinkend	toxisch	etsend	C at	H at	N at	O at	stofnummer 1 aantal	stofnummer 2 aantal	stofnummer 3 aantal	stofnummer 4 aantal	stofnummer 5 aantal	stofnummer 6 aantal	naam	jaar v opname of mutatie
1 5	6	7 10	11 12	13	14	15	16	17 18	19 21	22 23	24 25							78	79 80
39002																			
39002																			
1 CARD CODE	2 TYPE OF MODIFICATION	3 MATERIAL NUMBER	4 MATERIAL GROUPING	5 POLLUTING	6 ODOUROUS	7 TOXIC	8 CORROSIVENESS	9 CARBON ATOMS	10 HYDROGEN ATOMS	11 NITROGEN ATOMS	12 OXYGEN ATOMS	13 MATERIAL NUMBER 1 14 NUMBER						NAME	YEAR OF RECORDING OR MODIFICATION

1-8

De met * gemerkte velden moeten steeds geheel worden ingevuld
The fields marked with a (*) must always be completely filled in

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APPENDIX 3

Codes

A. TYPE OF MODIFICATION

1. New Data
2. Modification of Existing Data
3. Removal of Existing Data

B. PLANT FUNCTION

000 AGRICULTURE AND FISHING

010 AGRICULTURE AND HORTICULTURE

011 Farming and Stockbreeding
012 Horticulture
013 Parks and Gardening Concerns
014 Agrarian Support Industries

020 FORESTRY

020 Forestry

030 FISHING

Fishing

100 MINERAL EXTRACTION

110 COAL MINES

110 Coal Mines

120 PETROLEUM AND NATURAL GAS EXPLORATION AND EXTRACTION

120 Petroleum and Natural Gas Exploration and Extraction

190 OTHER MINERAL EXTRACTION

191 Sand and Gravel Extraction
192 Salt Extraction
199 Any other Mineral Extraction

INDUSTRY

200 FOODSTUFFS AND LUXURY FOODS INDUSTRY

201 Slaughterhouses and Meat Processing Industry
202 Dairy and Milk Derivatives Industry
203 Fish Treatment Installations
204 Flour Mills, Barley and Rice Hulling Mills and similar industries
205 Sugar Industry
206 Margarine and other Vegetable and Animal Oils Industry
207 Vegetable and Fruit Processing Industry
208 Bread, Rusk, Cake and Biscuit Plants
209 Cocoa, Chocolate and Confectionary Industry
211 Starch and Starch Derivatives Industry
212 Forage Industry
213 Others kinds of Nutritional Industry
214 Alcohol Plants and Distilleries
215 Beer Breweries and Malthouses
217 Tobacco Processing Industry

220 TEXTILE INDUSTRY

221 Wood Industry
222 Cotton Industry
223 Jersey and Stocking Industry
224 Textiles Improvement Industry
225 Carpet and Floor Covering Industry
226 Linoleum and Felt Floor Cloths Industry
227 Textile Goods Industry (exclusive of clothing)
229 Other kinds of textile Industries

230 CLOTHING INDUSTRY

231 Confection Clothing Industry
232 Piece-Work Clothing Industry
233 Made-to-Measure Clothing Industry
234 Pelt Preparation, Fur, and Furred Articles Industry
235 Hat, Cap, and Millinery Industry

240 LEATHER, FOOTWARE, AND OTHER LEATHER GOODS INDUSTRIES (EXCLUSIVE OF CLOTHING)

241 Leather Industry
242 Leather Goods Industry
243 Footware Industry

250 WOODWORKING AND FURNITURE INDUSTRY (EXCLUSIVE OF METAL FURNITURE)

251 Sawmills, Planing Mills, and similar types of mills
252 Plywood, Veneer, Fibre, Chipboard and wood preserving industries
253 Timber and Parquet Floor Industry (carpentry)
254 Wood-packing Industry
255 Other kinds of wood products industry
256 Cork, Twine, and Bristle Wares Industry
257 Furniture Industry (exclusive of metal furniture)

260 PAPER AND PAPER GOODS INDUSTRY

261 Paper and Carton Industry
262 Paper Goods Industry
263 Cardboard and Corrugated Cardboard Industry

270 GRAPHICS INDUSTRY, PUBLISHERS

271 Graphics Industry
272 Publishers
273 Binderies

280 PETROLEUM INDUSTRY

281 Petroleum Refining
282 Petroleum and Coal Products Industry

290 CHEMICAL INDUSTRY

291 Artificial Fertilizer Industry
292 Synthetic Resin and similar industries
293 Dye and Pigment Industry
294 Other Chemical Raw Materials Industries
295 Paint, Lacquer, Varnish and Printing Ink Industry
296 Medical Products and Dressings Industry
297 Soap, Washing and Cleansing Products, Perfumes and Cosmetics Industry
298 Chemical Pesticides and similar industries
299 Other Chemical Products Industries

300 SYNTHETIC THREADS AND FIBRES INDUSTRY

300 Synthetic Threads and Fibres Industry

310 RUBBER AND SYNTHETIC MATERIALS PROCESSING INDUSTRY

311 Rubber Processing Industry
312 Re-treading Industry
313 Synthetic Material Processing Industry

320 CONSTRUCTION MATERIALS, EARTHENWARE AND GLASS INDUSTRY

321 Brick and Tile Industry
322 Earthenware Industry
323 Limestone Industry
324 Cement and Lime Industry
325 Concrete and Cement Products Industry
326 Natural Stone Processing Plants
327 Other Mineral Products Industry
328 Glass and Glass Processing Establishments

330 BASE METAL AND METAL PRODUCTS INDUSTRY (not including machinery and transportation equipment)

331 Pig Iron and Steel Industry
332 Steel Tubing Industry
333 Wire-drawing and Cold-rolled Mills
334 Non-ferrometallic Industries

340 Foundries
341 Blacksmiths, Stamping and Press Installations
342 Screw, Lathing, Springs and similar industries
343 Tank, Reservoir and Pipeline Construction
344 Other Construction Yards
345 Metal Furniture Industry
346 Metal Packing Industry
347 Heating and Cooking Appliance Industry (not including electrical appliances)
348 Other Metal Goods Industry
349 Forges and similar Surface Treatment Plants

350 HEAVY MACHINE INDUSTRY

351 Agriculture Machinery Industry
352 Metal-Processing Machinery Industry
353 Manufacture of Machines and Appliances for the Food, Chemical and related Industries
354 Crane and other Heavy Transport Industry, Manufacturers of Machinery for Mining, Construction Activity, Construction Materials and Metallurgical Industry
355 Gear, Bearing and other driving elements Industry
356 Manufacture of Machinery and Apparatus for Industries not yet mentioned
357 Boiler and Power Machinery Industry
358 Office Machines Industry
359 Other Machines and Appliances Industry

360 ELECTROTECHNICAL INDUSTRY

361 Electrical Wire and Cable Industry
362 Electric Motors, Generators, Transformers, Switching Gear and Installation Materials Industry
369 Other Electrotechnical Industry

370TRANSPORTATION INDUSTRY

371 Automobile Industry and Assembly Plants
372 Body Work, Trailer and Tractor Trailer Industry
373 Automotive Parts Industry
374 Ship Building and Maintenance Industry
375 Rail Car and Railway Shops
376 Bicycle and Motorcycle Industry
377 Aircraft and Aircraft Repair and Maintenance Industry
379 Industries for Other Means of Transport

380 INSTRUMENTS AND OPTICS INDUSTRY

381 Medical Tools and Orthopedic Instruments Industry
382 Measurement and Regulation Apparatus and other Instrument Industries
383 Optical and Phototechnical Industry
384 Clock and Watch Industry

390 OTHERINDUSTRIES

391 Diamond, Gold and Silver Manufacturers and Jewellry Industry
392 Musical Instruments Industry
393 Photographic and Film Industry
394 Toys and Sporting Goods Industry
395 Social Activity

399 Any other Processing and Manufacturing Industry

400 PUBLIC UTILITIES

400 PUBLIC UTILITIES

401 Electrical Utilities
402 Gas Distribution Utilities
403 Water Pipeline Utilities

500 CONSTRUCTION ACTIVITIES AND INSTALLATIONS CONCERNS

510 CONSTRUCTION ACTIVITIES

511 Private and Public Utility Construction Concerns
512 Land, Water and Highway Construction Concerns
513 Painters, Glazers and Wallpaper Hangers
514 Plastering and Stucco Concerns
519 Other types of Building-finishing Concerns

520 CONSTRUCTION INSTALLATIONS CONCERNS

521 Plumbers, Fitters and Sanitary Engineering Concerns
522 Central Heating, Air Conditioning Installation and Insulation Concerns
523 Electrotechnical Installation Concerns (private and public construction)

600 TRADE, HOTEL AND RESTAURANT ACTIVITY, REPAIR OF CONSUMER GOODS INDUSTRY

610 WHOLESALE TRADE

611 Wholesale trade in farming goods, feed lots, ornamental goods, fertilizers
612 Wholesale trade in live animals (excluding poultry)
613 Wholesale trade in textile raw materials and semi-finished goods, hides, leather, raw tropical goods (excluding rubber)
614 Wholesale trade in minerals, metals, mineral oil products, fuels
615 Wholesale trade in chemicals, oils, greases, non-tropical oil seeds and other oil-bearing seeds, rubber
616 Wholesale trade in wood, plate glass, plumbing and construction materials
617 Wholesale trade in machinery and apparatus for metal-and wood-working, construction activity, graphics industry, processing industry, agriculture machinery, materials for domestic transport, office machines
618 Wholesale trade in machinery and apparatus for heating and cooling technology, motors, pumps, fittings, electrotechnical and electronic instruments, calibration and control gear, international transport, other machines and apparati
619 Wholesale trade in packing material and business essentials
621 Wholesale trade in furniture, antiques, prints, etc.
622 Wholesale trade in household articles, iron and metal goods, automobile accessories, paint, wallpaper
623 Wholesale trade in textile goods, footware, leather goods
624 Wholesale trade in vegetable-derived foodstuffs, luxury foods, nutritional foods in general
625 Wholesale trade in animal-derived foodstuffs, margarine, etc.
626 Wholesale trade in pharmaceutical, medical, cosmetic goods and cleaning products
627 Wholesale trade in paper, books, office supplies, etc.
628 Wholesale trade in optical, photographic, sport, recreation and jewellry goods, clocks, fancy goods, toys and other not previously mentioned articles and goods of a general nature
629 Wholesale trade in scrap, old articles and waste products

630/640 MIDDLEMEN IN BUSINESS TRADE

These are graded in the same fashion as classes 61/62.

650/660 RETAIL TRADE

651 Retail trade in animal-derived foodstuffs
652 Retail trade in vegetable-derived foodstuffs, luxury foods, and foodstuffs of a general nature
653 Drug Stores
654 Retail trade in medical, perfume and druggist goods
655 Retail trade in clothes and underwear, fashion articles
656 Retail trade in clothing goods, small business goods, textile goods, and goods of a general nature
657 Retail trade in footware, leather goods and travel necessities
658 Retail trade in household cloth goods, floor covering
659 Retail trade in furniture and other household furnishings
661 Retail trade in iron goods, paint, wallpaper, glass and earthenware etc., and household articles of a general nature
662 Retail trade in automobiles, bicycles, etc.
663 Gasoline service stations
664 Retail trade in printing, office and education goods
665 Retail trade in photographic and optical instruments, clocks, gold and silver objects and jewellry
666 Retail trade in flowers, plants, gardening needs, animals and animal needs
667 Retail trade in fuels (excluding motorized vehicle fuels)
668 Retail trade in other kinds of specialized articles
669 Warehouse, mail order and other retail goods trade

670 HOTELS, RESTAURANTS, CAFES ETC.

671 Concerns supplying the restaurant and dining trade
672 Plants supplying the liquid refreshment trade
673 Private eating establishments
674 Hotels and pensions
675 Vacation sites, youth hostels, camping grounds, etc.

680 REPAIR FACILITIES FOR CONSUMER GOODS

681 Shoe and other types of leather goods repair facilities
682 Automobile repair facilities
683 Bicycle and motorized bicycle repair facilities
684 Clock repair facilities
685 Gold and silversmith (repair) facilities
686 Electrical goods repair facilities
687 Musical instrument repair facilities
689 Repair facilities of any other type of consumer goods

700 SHIPPING, STORAGE AND COMMUNICATION CONCERNS

710 RAILWAYS

710 Railways

720 HIGHWAY TRAVEL

721 Streetcar and busline services, etc.
722 Taxi and touring concerns
723 Highway transport of freight
724 Other industries in the highway transport business

730 NAVIGATION

731 International navigation
732 Business navigation
733 Firms related to navigation

740 INLAND NAVIGATION

741 Inland navigation business
742 Other businesses related to inland navigation

750 AIR TRAVEL

751 Air travel businesses
752 Other businesses related to air travel

760 CONCERNS INCIDENTAL TO TRAVEL

761 Travel bureaus
762 Shippers, shipping brokers, and other intermediaries
763 Warehouse and dock storage facilities

770 COMMUNICATION FIRMS

770 Communication firms

800 BANK AND INSURANCE ACTIVITIES, BUSINESS SERVICES

810 BANKING

811 Federal banks and central banks
812 Co-op banks, savings banks, giro banking services, etc.
813 Other credit and financing establishments
814 Supply industries for the banking business

820 INSURANCE

821 Life insurance, pension funds
822 Disaster, sickness and accident insurance business (not including the socialized insurance organs)
823 Assurance intermediaries

830 DEALING AND TRADE IN REAL ESTATE ETC.

831 Dealing in and trade in real estate
832 Brokers in real estate, etc

840 SUPPORT INDUSTRIES FOR BUSINESS

841 Legal services
842 Accounting, bookkeeping and taxation consultants
843 Computing services
844 Engineers, architects and technical development and advisory bureaus
845 Advertizing bureaus
846 Economic advice offices
847 News and wire services
848 Employment offices
849 Other types of business support industry

850 RENTAL OF MACHINES AND OTHER TYPES OF TRANSPORTABLE PROPERTY

851 Car rental firms (without chauffeur)
852 Machine rental firms (without operators)
853 Rental concerns for consumer goods
859 Rental of other types of transportable property

900 OTHER SERVICE ORGANIZATIONS

900 PUBLIC ADMINISTRATION, DEFENCE, AND GOVERNMENTAL SOCIAL CARE

901 General administration
902 Embassies, consulates and international business organizations
903 Judicial organizations and prison systems
904 Police, etc.
905 Fire departments
906 Air, sea and land forces
907 Governmental social care organizations, disability insurance, and other governmental insurance schemes

910 RELIGIOUS ORGANIZATIONS, ETC.

910 Religious Organizations, etc.

920 EDUCATION

921 Preschool education
922 Elementary school education
923 Special schools
924 Secondary school education
925 Elementary and intermediate trade schools
926 Advanced trade schools
927 Scientific or the equivalent education
928 Youth guidance
929 Other kinds of education

930 HEALTH AND VETERINARIAN SERVICES

931 General and specialized hospitals (not including psychiatric)
932 Psychiatric establishments and special psychiatric clinics (not including nursing homes)
933 Mental retardation establishments (not including adoptive homes)
934 Nursing homes
935 Medical practices
936 Dentist and dental clinics
937 Mid-wife care, independent nursing care, etc.
938 Other establishments offering nursing care
939 Veterinary services

940 SOCIAL SERVICES

941 Geriatric homes, etc. (excluding home of the psychic disturbed elderly)
942 Children homes, foster homes, etc. (for the non-handicapped)
943 Home and day-care centres for handicapped (not schools)
944 Socio-medical, psychological and pedagogic services, etc.
945 Social welfare organizations
946 Family care and help for the elderly
947 Family planning and other family services

950 SOCIO-CULTURAL AND CULTURAL ESTABLISHMENTS

951 Activities in suburbs, wards and villages
952 Youth work
953 Guidance and development advice (outside the school system)
954 Library, musea and culture preservation
955 Radio and television
956 Movie activities
957 Auditoria and concert halls
958 Independent and communal artistry
959 Socio-cultural and cultural, interdisciplinary, co-operative and advisory organizations

960 SPORT AND RECREATION

961 Sport
962 Recreation
969 General, co-operative and advisory organizations in the sport and recreation field

970 EMPLOYER AND EMPLOYEE ORGANIZATIONS, RESEARCH ESTABLISHMENTS, OTHER SOCIAL ORGANIZATIONS

971 Organizations monitoring the observance of the public laws
972 Employer's and owner's organizations
973 Employee unions
974 Professional organizations
975 Research and other scientific establishments
979 Other kinds of social organizations

980 OTHER SUPPORTING INDUSTRIES

981 Cleansing and de-contamination firms
982 Cleaning firms
983 Laundry, chemical cleaning and dyeing establishments, etc.
984 Barber and beauty shops
985 Photographic studios
989 Other types of personal service industries

990 SPECIAL HOUSEKEEPING ACTIVITIES USING SALARIED EMPLOYEES

990 Special housekeeping activities using salaried employees (any specialized activity using salaried staff)

C. GEMEENTE (municipality)

PROVINCIE LIMBURG (Province of Limburg)

(name of the municipality) Gemeentenaam	Gemeente-code (municipality code)	(name of the muncipality)	Gemeente-code (municipality code)	(name of the municipality)	(municipality code)
Amstenrade	830	Kessel	872	Stevensweert	914
Arcen c.a.	831	Klimmen	873	Stramproij	915
Baexem	832	Limbricht	874	Susteren	916
Beegden	833	Linne	875	Swalmen	917
Beek	834	Maasbracht	876	Tegelen	918
Beesel	835	Maasbree	877	Thorn	919
Belfeld	836	Maastricht	878	Ubach over Worms	920
Bemelen	837	Margraten	879	Ulestraten	921
Berg c.a.	838	Meerlo-Wanssum	880	Urmond	922
Bergen L.	839	Meerssen	881	Vaals	923
Bingelrade	840	Melick c.a.	882	Valkenburg-Houthem	924
Bocholtz	841	Merkelbeek	883	Venlo	925
Born	842	Meijel	884	Venray	926
Broekhuizen	843	Mheer	885	Vlodrop	927
Brunssum	844	Montfort	886	Voerendaal	928
Bunde	845	Mook c.a.	887	Weert	929
Cadier c.a.	846	Munstergeleen	888	Wessem	930
Echt	847	Nederweert	889	Wittem	931
Elsloo	848	Neer	890	Wijlre	932
Eygelshoven	849	Nieuwenhagen	891	Wijnandsrade	933
Eijsden	850	Nieuwstadt	892		
Geleen	851	Noorbeek	893		
Gennep	852	Nuth	894		
Geulle	853	Obbicht c.a.	895		
Grathem	854	Ohé en Laak	896		
Grevenbicht	855	Oirsbeek	897		
Gronsveld	856	Posterholt	898		
Grubbenvorst	857	Roermond	899		
Gulpen	858	Roggel	900		
Haelen	859	Roosteren	901		
Heel c.a.	860	Schaesberg	902		
Heerlen	861	Schimmert	903		
Helden	862	Schinnen	904		
Herten	863	Schinveld	905		
Heythuysen	864	Sevenum	906		
Hoensbroek	865	Simpelveld	907		
Horn	866	Sittard	908		
Horst	867	Slenaken	909		
Hulsberg	868	Spaubeek	910		
Hunsel	869	St. Geertruid	911		
Jabeek	870	St. Odiliënberg	912		
Kerkrade	871	Stein	913		

PROVINCIE ZUID-HOLLAND (Province of Zuid-Holland)

Gemeentenaam (Name of the municipality)	Gemeente-code (municipality code)
Aar Ter	490
Abbenbroek	491
Alblasserdam	492
Alkemade	493
Alphen a.d. Rijn	494
Ameide	495
Ammerstol	496
Arkel	497
Asperen	498
Barendrecht	499
Benthuizen	500
Bergambacht	501
Bergschenhoek	502
Berkel c.a. Z.H.	503
Berkenwoude	504
Bleiswijk	505
Bleskensgraaf c.a.	506
Bodegraven	507
Boskoop	508
Brandwijk	509
Brielle	510
Capelle a.d IJssel	511
Delft	512
Dirksland	513
Dordrecht	514
Driebruggen	515
Everdingen	516
Geervliet	517
Giessenburg	518
Goedereede	519
Gorinchem	520
Gouda	521
Gouderak	522
Goudriaan	523
Goudswaard	524
's-Gravendeel	525
's-Gravenhage	526
's-Gravenzande	527
Groot Ammers	528
Haastrecht	529
Hagestein	530
Hardinxveld c.a.	531
Hazerswoude	532
Heenvliet	533
Heerjansdam	534
Hei en Boeicop	535
Heinenoord	536
Hellevoetsluis	537
Hendrik Ido Ambacht	538
Heukelum	539
Hillegom	540
Hoogblokland	541
Hoornaar	542
Katwijk	543
Kedichem	544
Klaaswaal	545
Koudekerk a.d. Rijn	546
Krimpen a.d. Lek	547
Krimpen a.d. IJssel	548
Langerak	549
Leerbroek	550
Leerdam	551
Leiden	552
Leiderdorp	553
Leidschendam	554
Leimuiden	555
Lekkerkerk	556
Lexmond	557
Lier De	558
Lisse	559
Maasdam	560
Maasland	561
Maassluis	562
Meerkerk	563
Middelharnis	564
Moerkapelle	565
Molenaarsgraaf	566
Monster	567
Moordrecht	568
Mijnsherenland	569
Naaldwijk	570
Nieuw Beijerland	571
Nieuw Lekkerland	572
Nieuwerkerk a.d. IJssel	573
Nieuwkoop	574
Nieuwland	575
Nieuwpoort	576
Nieuwveen	577
Noordeloos	578
Noordwijk	579
Noordwijkerhout	580
Nootdorp	581
Numansdorp	582
Oegstgeest	583
Oostflakkee	584
Oostvoorne	585
Ottoland	586
Oud Alblas	587
Oud Beijerland	588
Oudenhoorn	589
Ouderkerk a.d. IJssel	590
Papendrecht	591
Piershil	592
Poortugaal	593
Puttershoek	594
Pijnacker	595
Reeuwijk	596
Rhoon	597
Ridderkerk	598
Rockanje	599
Rotterdam	600
Rozenburg	601
Rijnsaterwoude	602
Rijnsburg	603
Rijswijk	604
Sassenheim	605
Schelluinen	606
Schiedam	607
Schipluiden	608
Schoonhoven	609
Schoonrewoerd	610
Sliedrecht	611
Spijkenisse	612
Stolwijk	613
Streefkerk	614
Strijen	615
Tienhoven	616
Valkenburg	617
Vianen	618
Vierpolders	619
Vlaardingen	620
Vlist	621
Voorburg	622
Voorhout	623
Voorschoten	624
Waddinxveen	625
Warmond	626
Wassenaar	627
Wateringen	628
Westmaas	629
Woerden	630
Woubrugge	631
Wijngaarden	632
Zevenhoven	633
Zevenhuizen	634
Zoetermeer	635
Zoeterwoude	636
Zuid Beijerland	637
Zuidland	638
Zwartewaal	639
Zwijndrecht	640

D. PROVINCIE (PROVINCE)

01	Groningen
02	Friesland
03	Drente
04	Overijssel
05	Gelderland
06	Utrecht
07	Noord-Holland
08	Zuid-Holland
09	Zeeland
10	Noord-Brabant
11	Limburg
12	Zuidelijke IJsselmeerpolders

B. CONTROL ON THE AIR QUALITY

0 Plant does not fall under the Air Pollution Act or the Public Nuisance Act.

1 Plant falls under the Air Pollution Act;control by the province.

2 Plant falls under the Air Pollution Act; control by the federal government.

3 Plant falls under the Public Nuisance Act; control by the municipality.

4 Plant falls under the Public Nuisance Act; control by the province.
(this includes all municipal activities)

5 Plant falls under the Public Nuisance Act; control by the federal government.

F. CONTROL ON THE WATER QUALITY

0 no control

1 controlled only by the federal government

2 controlled only by the provincial government

3 controlled only by the local water purification and/or control jurisdiction

4 controlled only by the municipality

5 controlled by the federal government and the provincial government or local water purification and/or control jurisdiction

6 controlled by the municipality and the provincial government or local water purification and/or control jurisdiction

7 controlled by the federal government and the municipality

8 controlled by the federal government and the provincial government and the local water purification and/or control jurisdiction

G. MATERIAL GROUPING (assigned only by the project directorate)

All materials have been classified according to a material grouping. Matter which could be classified into several groups must be put into the most appropriate group on the basis of its environmental hygienic effect. Regularly occurring mixtures of material have also been included in the grouping.

Elements and inorganic compounds

01	Aluminium	and	its	inorganic	compounds	
02	Antimony	"	"	"	"	
03	Arsenic	"	"	"	"	
04	Barium	"	"	"	"	****
05	Beryllium	"	"	"	"	
06	Boron	"	"	"	"	****
07	Cadmium	"	"	"	"	
08	Chromium	"	"	"	"	
09	Cobalt	"	"	"	"	
10	Copper	"	"	"	"	
11	Mercury	"	"	"	"	
12	Lithium	"	"	"	"	
13	Lead	"	"	"	"	
14	Manganese	"	"	"	"	****
15	Molybdenum	"	"	"	"	
16	Nickel	"	"	"	"	
17	Selenium	"	"	"	"	
18	Strontium	"	"	"	"	****
19	Telerium	"	"	"	"	
20	Tin	"	"	"	"	
21	Titanium	"	"	"	"	
22	Uranium	"	"	"	"	****

**** except fluoro- and cyano- compounds ****

23 Vanadium and its inorganic compounds
24 Iron " " " " ****
25 Silver " " " "
26 Zinc " " " " ****

**** except fluoro- and cyano- compounds ****

27
28
29
30
(reserved)

31 Not previously mentioned metals and inorganic metal compounds, with the exception of fluoro- and cyano- compounds and compounds of the metals sodium, potassium, magnesium and calcium
32 Regularly occuring mixtures of the materials in the groupings 01 to 31

33 Inorganic cyano- compounds not listed before

34 Fluorine and inorganic fluoro- compounds, not listed before
35 Chlorine and inorganic chloro- compounds, not listed before
36 Bromine and iodine and their inorganic compounds, not listed before
37 Regularly occuring mixtures of the materials in the groupings 34 to 36

38 Silicon and inorganic silicon compounds, not mentioned before
39 Phosphorus and inorganic phosphorus compounds, not mentioned before
40 Sulphur oxides
41 Nitrogen oxides
42 Carbon oxides
43 Sulphur and inorganic sulphur compounds, not mentioned before
44 Inorganic nitrogen compounds, not mentioned before
45 Carbon and inorganic carbon compounds, not mentioned before
46 Inorganic compounds of sodium, potassium, magnesium and calcium, not mentioned before
47 (reserved)

48 Any other inorganic compounds and inorganic matter (ocurring alone)

49 Regularly occuring mixtures of materials in the groupings 01 to 48

Organic Compounds

50 Saturated aliphatic hydrocarbons up to C_3

51 Unsaturated aliphatic hydrocarbons up to C_3

52 Aliphatic hydrocarbons greater than C_3

53 Monocyclic hydrocarbons

54 Polycyclic hydrocarbons

55 Regularly occuring mixtures of the groupings 50 to 54

56 Chlorinated organic compounds (except acidic chlorides and fluorine compounds)

57 Organic fluorine compounds

58 Organic bromine and iodine compounds

59 Regularly occuring mixtures of the materials in groupings 56 to 58

60 Alcohols

61 Glycols, epoxides and ethers

62 Phenols

63 Aldehydes and ketones

64 Carbonic acid, acidic chlorides, acidic anhydrides and salts of carbonic acids

65 Esters

66 Carbohydrates

67 (reserved)

68 (reserved)

69 Oxygen-containing organic compounds with only C, H, and O atoms, which do not belong to the groupings 60 to 68

70 Nitro- compounds

71 Amines

72 Amides

73 Isocyanates

74 Nitriles

75 Amino acids and proteins

76 Heterocyclic nitrogen compounds

77 (reserved)

78 (reserved)

79 Nitrogen-containing compounds, not belonging to the groupings 70 to 78

80 Mercaptans

81 Thioethers

82 Sulfonic acids and their salts

83 Heterocyclic sulphur compounds

84 (reserved)

85 (reserved)

86 Sulphur-containing organic compounds, not belonging to the groupings 80 to 85

87 Organic mercury compounds

88 Organic cadmium compounds

89 Other organometallic compounds

90 Organic silicon compounds

91 Organic phosphorus compounds

92 (reserved)

93 (reserved)

94 (reserved)

95 Organic compounds of two or more different groupings which because of their special character can not be included in the groupings 50 to 94

96 Regularly occuring mixtures of materials in the groupings 50 to 95

97 Regularly occuring mixtures of materials in the groupings 01 to 95

Special Groupings

98 Ions

99 Water quality analyses

H. KINDS OF INSTALLATIONS

This code is divided into groups and sub-groups (see pages H-1-1 and following pages). In general the first installation mentioned in a subgroup will be the "general installation". After the name will appear the expression "in general". This code for an installation should only be used for a collection of installations mentioned in the sub-group. One should use the coding for a collection of installations only when the effluents from each individual can not be obtained. In order to simplify the determination of the appropriate group or sub-group, the following summary should be useful:

H.1 General installations, offices, canteens, etc.

- energy generation in the form of heat, electricity or pressure
- water preparation
- waste water purification
- repair and maintenance shops
- offices, canteens, cleaning-up areas, etc.
- laboratoria
- pilot plants and testing installations

H.2 Storage, shipment and pipeline transport

- general cargo
- liquid and gaseous fuels
- liquid and gaseous chemical and solutes (not in gas bottles)
- liquid foodstuffs and liquid raw materials for foodstuffs
- liquid wastes
- other liquid or gaseous materials
- pourable materials in sealed containers
- materials pourable in a continuous pour
- pipeline transport
- sewage systems

H 3 The mining and purification of minerals

- petroleum and natural gas
- coal
- other minerals

H 4 The processing of petroleum

- refining of petroleum
- petroleum products
- containerization of pertroleum products

H 5 The manufacture of industrial gases and coal derivatives

H 6 The manufacture of inorganic chemicals

H 7 The manufacture of petrochemicals and other raw organic chemicals

- aliphatic hydrocarbons
- cyclic hydrocarbons
- alcohols
- glycerol, glycols, epoxides and ethers
- phenols
- aldehydes and ketones
- carbonic acids and acidic anhydrides
- esters
- nitrogen compounds
- halogenic hydrocarbons
- sulphur compounds

H 8 The manufacture of polymers

- thermoplasts
- thermoharders
- elastomers

H 9 The manufacture of finished chemical products

- pigments and dyes
- medical supplies and cosmetics
- washing and cleansing supplies
- other chemical products
- finishing of other chemical products

H 10 The manufacture of foodstuffs and luxury foods

H 11 The manufacture of metals and of metal products and machinery

- preparation and shaping of metals
- metal surface finishing
- plating of metals or of other materials onto metal
- assembly and construction

H 12 Manufacture of electrotechnical goods

H 13 Manufacture of construction materials, earthenware and glass

- ceramic goods
- non-ceramic construction materials
- glass and glass products

H 14 Manufacture of fibres, textiles and textile goods

- fibres
- textiles
- textile goods

H 15 Manufacture of paper, paper goods and graphics materials and photo-developing installations

- paper
- paper goods
- graphics materials
- photo-developing installations

H 16 Processing of wood, synthetic materials, rubber, hides and leather

- wood
- synthetic materials
- rubber
- hides and leather

H 17 Miscellaneous manufacturing activities

H 18 Supporting industries

H. KINDS OF INSTALLATIONS

H.1 General installations, offices, canteens, etc.

code		units code	units
1000	Generation of energy in the form of heat, electricity or pressure	5	watts of useful power
1001	Generation of steam	"	"
1002	Generation of warm water	"	"
1003	Generation of hot air	"	"
1004	Generation of heat by other means	"	"
1005	Generation of electricity	"	"
1006	Generation of cold	"	"
1007	Generation of compressed air	"	"
1009	Generation of other forms of energy	"	"
1010	Preparation of water, in general	4	l/h of output
1011	Preparation of potable water	"	"
1012	Preparation of processing water (e.g. demineralization)	"	"
1013	Preparation of water for boilers (e.g. demineralized and softened water)	"	"
1014	Preparation of cooling water	"	"
1019	Preparation of other kinds of water	"	"
1020	Waste water purification, in general	4	l/h of input
1021	Waste water purification, mechanical only	"	"
1022	Waste water purification, chemical only	"	"
1023	Waste water purification, mechanical and chemical	"	"
1024	Waste water purification, mechanical and biological	"	"
1025	Waste water purification, mechanical, chemical and biological	"	"
1029	Other waste water purification installations	"	"

For sewage systems see H.2.

		units code	units
1030	Waste treatment, in general	2	g/h of input
1031	Combustion of household wastes only	"	"
1032	Combustion of chemical wastes only	"	"
1033	Combustion of household and chemical wastes	"	"
1034	Shredding of household wastes	"	"
1035	Sorting of household wastes	"	"
1036	Composting	"	"
1037	Controlled dumping of wastes	"	"
1038	Uncontrolled dumping of wastes	"	"
1049	Other forms of waste treatment	"	"

For storage and shipping of wastes see H.2

		units code	units
1050	Repair and maintenance shops	6	number of people employed
1060	Offices, canteens, cleaning-up areas, etc. (together)	"	"
1061	Offices	"	"
1062	Canteens	"	"
1063	Cleaning-up areas	"	"
1069	Other locales (excluding laboratoria)	"	"
1070	Laboratoria, in general	6	number of people employed
1071	Laboratoria, chemical	"	"
1072	Laboratoria, physical	"	"
1073	Laboratoria, biological	"	"
1074	Laboratoria, medical	"	"
1075	Laboratoria, analytical	"	"
1076	Laboratoria, metallurgical	"	"
1077	Laboratoria, technological	"	"
1078	Laboratoria, film and photographical	"	"
1079	Other laboratoria	"	"
1080	Pilot plants and testing installations, in general	2	g/h of product
1081	Pilot plant installations in the petroleum and chemical industries	"	"

1082	Pilot plant installations in the foodstuffs and luxury foods industry	2	g/h of product
1083	Pilot plant installations in the metal and metal products industry	"	"
1084	Testing installations in the machine industry	"	"
1085	Testing installations in the electrotechnical industry	"	"
1089	Testing installations in other industries	"	"

H.2 Shipping, storage and pipeline transport

These installations should only be recorded as separate independent installations if they can not be included as a segment of any other installation; i.e. only if they are independent concerns or form a more or less independent segment of a concern. For all other cases refer to the code lists for apparatus.

Should there be various kinds of storage (such as of sealed containers and open pours) and if only the combined effluent from it can be determined, then an estimate must be made of the contribution of each kind. It will occur in many cases that the contribution of one of the installations is much smaller than that of the other. In those cases the whole effluent can be attributed to that installation which gives rise to the most effluent.

code		units code	units
1100	Storage and shipment of cargo, in general	3	l of normally occupied volume
1101	Storage and shipment of tanks	"	"
1102	Storage and shipment of containers	"	"
1103	Storage and shipment of gas bottles	"	"
1104	Cold storage	"	"
1109	Storage and shipment of other cargo	"	"
1110	Storage and shipment of liquid and gaseous fuels in general (not in gas bottles)	3	l of normally occupied volume
1111	Storage and shipment of liquid natural gas	"	"
1112	Storage and shipment of liquid propane	"	"
1113	Storage and shipment of liquid butane	"	"
1114	Storage and shipment of petroleum	"	"
1115	Storage and shipment of gasoline	"	"
1119	Storage and shipment of other liquid or gaseous fuels	"	"
1120	Storage and shipment of liquid and gaseous chemicals and solutes (not in gas bottles)	3	l of normally occupied volume

1130	Storage and shipment of liquid foodstuffs and liquid materials for the foodstuffs industry	3	1 of normally occupied volume
1140	Storage and shipment of liquid wastes, in general	"	"
1141	Storage and shipment of liquid wastes, open	"	"
1142	Storage and shipment of liquid wastes, sealed	"	"
1150	Storage and shipment of other liquid or gaseous materials	"	"
1160	Storage and shipment of pourable materials in sealed containers, in general	3	1 of normally occupied volume
1161	Storage and shipment of pourable chemicals in sealed containers	"	"
1162	Storage and shipment of grains in sealed containers	"	"
1163	Storage and shipment of pourable artificial fertilizers in sealed containers	"	"
1164	Storage and shipment of solid waste materials in sealed containers	"	"
1169	Storage and shipment of other materials in sealed containers	"	"
1170	Storage and shipment of pourable materials in an open pour, in general	3	1 of normally occupied volume
1171	Storage and shipment of coal in an open pour	"	"
1172	Storage and shipment of minerals in an open pour	"	"
1173	Storage and shipment of sand, gravel and clay in an open pour	"	"
1174	Storage and shipment of solid waste materials in an open pour	"	"
1179	Storage and shipment of other pourable materials in an open pour	"	"

1180	Pipeline transport, in general	4	l/h of pumped material
1181	Pipeline transport of natural gas	"	"
1182	Pipeline transport of petroleum	"	"
1183	Pipeline transport of other liquid or gaseous fuels	"	"
1184	Pipeline transport of liquid or gaseous chemicals	"	"
1185	Pipeline transport of water (for waste water refer to 1190 and following)	"	"
1186	Pipeline transport of solid material in suspension	"	"
1189	Pipeline transport of other materials	"	"
1190	Sewage systems, in general	4	l/h of dry weather flow
1191	Municipal sewage systems, combined flows	"	"
1192	Municipal sewage systems, separated flows	"	"
1193	Municipal sewage systems, improved combined flows	"	"
1194	Transportation systems of purification jurisdictions	"	"
1195	Sewage systems of plants	"	"
1199	Other sewage systems	"	"

H.3 The Mining and purification of minerals

code		units code	units
1200	The extraction and purification of petroleum and natural gas, in general	2	g/h of product
1201	Extraction of natural gas	"	"
1202	The purification of natural gas	"	"
1203	Extraction of petroleum	"	"
1204	De-watering of petroleum	"	"
1210	Extraction and processing of coal, in general	2	g/h of product
1211	Extraction of coal	"	"
1212	Crushing, grinding and washing of coal	"	"
1213	Manufacture of coal briquetts	"	"
1220	Extraction of other sedimentary deposits, in general	2	g/h of product
1221	Extraction of rock salt	"	"
1222	Extraction of other salts	"	"
1223	Extraction of marl	"	"
1224	Extraction of clay	"	"
1225	Extraction of sand	"	"
1226	Extraction of gravel	"	"
1227	Extraction of limestone	"	"
1229	Extraction of other sedimentary deposits not yet mentioned	"	"

H.4 The processing of petroleum

code		units code	units
1300	The refining of petroleum, in general	2	g/h of supplied matter
1301	De-salination of petroleum	"	"
1302	Distillation of petroleum or of its fractions	"	"
1303	De-sulphuring of petroleum or of its fractions	"	"
1304	Thermal cracking of petroleum or of its fractions	"	"
1305	Catalytic cracking of petroleum or of its fractions	"	"
1306	Alkylation of petroleum or of its fractions	"	"
1307	Polymerization of petroleum or of its fractions	"	"
1308	Catalytic recombination of petroleum or of its fractions	"	"
1319	Other processes on petroleum (excluding nos. 1320 to 1339)	"	"
1320	The manufacture of petroleum products, in general	2	g/h of product
1321	Blending of gasoline	"	"
1322	Manufacture of other fuels	"	"
1323	Manufacture of lubricating oils and paraffin wax	"	"
1324	Manufacture of asphalt	"	"
1325	Manufacture of solutes and chemical raw materials (only by separation out of the products mentioned in nos. 1300 to 1319, and not by chemical reaction. For these see the codes under H.5 to H.9)	"	"
1339	Manufacture of other petroleum products	"	"
??? 1340	The filling of petroleum products, in general	2	g/h of product
1341	The filling of bottled gas	"	"
1342	The containerization of otherpetroleum products (under pressure)?	"	"

H.5 The manufacture of industrial gases and coal derivatives

code		units code	units
1400	Manufacture of cokes and industrial gases in general	2	g/h of product
1401	Manufacture of coal gas/cokes	"	"
1402	Manufacture of synthetic gas with steam	"	"
1403	Manufacture of synthetic gas by partial oxidation	"	"
1404	Manufacture of producer gas	"	"
1405	Manufacture of acetylene	"	"
1406	Manufacture of hydrogen by electrolysis	"	"
1407	Manufacture of hydrogen by a steam-cold-water process	"	"
1408	Manufacture of hydrogen by partial oxidation of hydrocarbons	"	"
1409	Other methods for the manufacture of hydrogen	"	"
1410	Manufacture of ammonia	"	"
1411	Manufacture of nitrogen and oxygen from air	"	"
1412	Manufacture of nobles gases from air	"	"
1413	Manufacture of helium from natural gas	"	"
1414	Manufacture of carbonic acid	"	"
1415	Manufacture of carbon monoxide	"	"
1429	Manufacture of other gases	"	"
1430	Distillation of coal tar	"	"
1440	Manufacture of other semi-finished products from coal	"	"

H.6 The manufacture of inorganic raw materials (see H.5 also)

code		units code	units
1500	Manufacture of inorganic raw materials, in general	2	g/h of product
1501	Manufacture of sulphuric acid by the contact process	"	"
1502	Manufacture of sulphuric acid by the chamber process	"	"
1503	Manufacture of hydrochloric acid	"	"
1504	Manufacture of nitric acid	"	"
1505	Manufacture of phosphoric acid	"	"
1506	Manufacture of elemental phosphorus	"	"
1507	Manufacture of salt by electrolysis (mercury cell)	"	"
1508	Manufacture of salt by electrolysis (membrane cell)	"	"
1509	Manufacture of sodium carbonate	"	"
1510	Manufacture of sodium bicarbonate	"	"
1511	Manufacture of sodium thiosulphate	"	"
1512	Manufacture of sodium silicates	"	"
1513	Manufacture of hydrogen peroxide	"	"
1514	Manufacture of other peroxide compounds	"	"
1515	Manufacture of sodium hypochlorite	"	"
1516	Manufacture of chlorine lime bleach (bleaching powder)	"	"
1517	Manufacture of sodium chlorate	"	"
1518	Manufacture of sodium phosphates	"	"
1519	Manufacture of super phosphate	"	"
1520	Manufacture of double super phosphate	"	"
1521	Manufacture of lime ammonia saltpeter	"	"
1522	Manufacture of lime saltpeter	"	"
1523	Manufacture of ammonium sulphate saltpeter	"	"
1524	Manufacture of ammonium nitrate	"	"
1525	Manufacture of sodium nitrate	"	"
1526	Manufacture of nitrogen lime	"	"
1527	Manufacture of hydrogen cyanide	"	"
1528	Manufacture of carbide	"	"
1529	Manufacture of artificial fertilizer	"	"
1530	Manufacture of chromates	"	"

code		units code	units
1531	Manufacture of permanganates	2	g/h of product
1532	Manufacture of soot	"	"
1533	Manufacture of sulphur	"	"
1534	Manufacture of aluminium oxide	"	"
1535	Manufacture of aluminium sulphate/ alum	"	"
1536	Manuracture of aluminium chloride (dry)	"	"
1537	Manufacture of sulphur hydrocarbons	"	"
1538	Manufacture of borates	"	"
1539	Manufacture of bromine	"	"
1540	Manrfacture of iodine	"	"
1541	Manufacture of fluorine	"	"
1542	Manufacture of copper compounds	"	"
1543	Manufacture of molybdenum compounds	"	"
1544	Manufacture of barium compounds	"	"
1545	Manufacture of strontium compounds	"	"
1546	Manufacture of lithium compounds	"	"
1547	Manufacture of rare compounds	"	"
1548	Manufacture of ammonium sulphate	"	"
1599	Manufacture of other inorganic raw chemicals	"	"

H.7 The manufacture of petrochemicals and other organic raw chemicals

(refer also to F.4 and H.5)

code		units code	units
1600	The manufacture of petrochemicals and/or other organic raw chemicals, in general (excluding the processes mentioned in 1300 (and following) and 1400 (and following))	2	g/h of product
1601	The manufacture of aliphatic hydrocarbons, in general (excluding the processes mentioned in 1300 and 1400 and following)	"	"
1602	The manufacture of butadiene	"	"
1603	The manufacture of isoprene	"	"
1609	The manufacture of other aliphatic hydrocarbons (excluding the processes mentioned following numbers 1300 and 1400)	"	"
1610	The manufacture of cyclic hydrocarbons, in general (excluding the processes mentioned following numbers 1300 and 1400)	"	"
1611	The manufacture of cyclohexane	"	"
1612	The manufacture of ethyl benzene	"	"
1613	The manufacture of styrene	"	"
1614	The manufacture of isopropyl benzene (cumene)	"	"
1615	The manufacture of dodecyl benzene	"	"
1619	The manufacture of other alkyl benzenes (excluding the processes mentioned following numbers 1300 and 1400)	"	"
1629	The manufacture of other cyclic hyrdocarbons (excluding the processes mentioned following numbers 1300 and 1400)	"	"
1630	The manufacture of alcohols, in general (excluding glycerol, glycols, and phenols; for these see numbers following 1650 and 1670)	"	"
1631	The manufacture of methanol	"	"
1632	The manufacture of ethanol (synthetic)	"	"
1633	The manufacture of propanol	"	"

		units code	units
1634	The manufacture of isopropanol	2	g/h of product
1635	The manufacture of n-butanol	"	"
1636	The manufacture of isobutanol	"	"
1637	The manufacture of sec-butanol	"	"
1638	The manufacture of allyl alcohol	"	"
1639	The manufacture of cyclo hexanol	"	"
1649	The manufacture of other alcohols (excluding glycerol, glycols and phenols; for these refer to the numbers after 1650 and 1670)	"	"
1650	The manufacture of glycerol, glycols, epoxides and ethers, in general	2	g/h of product
1651	The manufacture of ethylene glycol	"	"
1652	The manufacture of glycerol (synthetic)	"	"
1653	The manufacture of glycerol by the decomposition of fats	"	"
1654	The manufacture of polyglycols	"	"
1655	The manufacture of ethene oxide	"	"
1656	The manufacture of propene oxide	"	"
1657	The manufacture of diethyl ether	"	"
1658	The manufacture of glycol ether	"	"
1669	The manufacture of other glycols, epoxides and ethers	"	"
1670	The manufacture of phenols, in general	2	g/h of product
1671	The manufacture of phenol	"	"
1672	The manufacture of cresol	"	"
1673	The manufacture of nonly phenol	"	"
1679	The manufacture of other phenols	"	"
1680	The manufacture of aldehydes and ketones, in general	2	g/h of product
1681	The manufacture of formaldehyde	"	"
1682	The manufacture of acetaldehyde	"	"
1683	The manufacture of benzaldehyde	"	"
1684	The manufacture of acrolein	"	"
1685	The manufacture of acetone	"	"
1686	The manufacture of methyl-ethyl ketone	"	"

		units code	units
1687	The manufacture of methyl isobutyl ketone	2	g/h of product
1688	The manufacture of cyclohexanon	"	"
1699	The manufacture of other aldehydes and ketones	"	"
1700	The manufacture of carbonic acids and acidic anhydrides, in general	2	g/h of product
1701	The manufacture of formic acid	"	"
1702	The manufacture of acetic acid	"	"
1703	The manufacture of acetic acid (anhydride)	"	"
1704	The manufacture of butyric acid	"	"
1705	The manufacture of adipine acid	"	"
1706	The manufacture of citric acid	"	"
1707	The manufacture of lactic acid	"	"
1708	The manufacture of tartaric acid	"	"
1709	The manufacture of malic acid	"	"
1710	The manufacture of benzoin acid	"	"
1711	The manufacture of terephthalic acid	"	"
1712	The manufacture of iso phthalic acid	"	"
1713	The manufacture of phthalic acid anhydride	"	"
1719	The manufacture of other carbonic acids and acidic anyhdrides	"	"
1720	The manufacture of esters, in general	2	g/h of product
1721	The manufacture of methyl acetate	"	"
1722	The manufacture of ethyl acetate	"	"
1723	The manufacture of isopropyl, butyl and/or amyl acetate	"	"
1724	The manufacture of vinyl acetate	"	"
1725	The manufacture of methyl acrylate	"	"
1726	The manufacture of methyl metacrylate	"	"
1727	The manufacture of dimethyl terephthalate	"	"
1728	The manufacture of other phthalates	"	"
1729	The manufacture of glycol esters	"	"
1739	The manufacture of other esters	"	"

		units code	units
1740	The manufacture of organic nitrogen compounds in general	2	g/h of product
1741	The manufacture of nitro benzene	"	"
1742	The manufacture of picrine acid	"	"
1743	The manufacture of aniline	"	"
1744	The manufacture of hexa methylene diamine	"	"
1745	The manufacture of urea	"	"
1746	The manufacture of melamine	"	"
1747	The manufacture of acrylo nitrile (ACN)	"	"
1748	The manufacture of adipo nitrile	"	"
1749	The manufacture of di-iso cyanates	"	"
1750	The manufacture of caprolactam	"	"
1751	The manufacture of ethanol amines	"	"
1752	The manufacture of nylon salt	"	"
1753	The manufacture of amino acids	"	"
1759	The manufacture of other organic nitrogen compounds	"	"
1760	The manufacture of halogenic hydrocarbons, in general	2	g/h of product
1761	The manufacture of chloromethane	"	"
1762	The manufacture of dichloroethane	"	"
1763	The manufacture of trichloroethane	"	"
1764	The manufacture of perchloroethylene	"	"
1765	The manufacture of vinyl chloride	"	"
1766	The manufacture of allyl chloride	"	"
1767	The manufacture of chloroprene	"	"
1768	The manufacture of chlorobenzene	"	"
1769	The manufacture of phosgene	"	"
1770	The manufacture of vinyl fluoride	"	"
1771	The manufacture of chlorofluoromethanes (freons)	"	"
1779	The manufacture of other halogenic hydrocarbons	"	"

		units code	units
1780	The manufacture of sulphur compounds, in general	2	g/h of product
1781	The manufacture of alkyl aryl sulphonates	"	"
1782	The manufacture of mercaptans	"	"
1783	The manufacture of thioethers	"	"
1789	The manufacture of other sulphur compounds	"	"
1799	The manufacture of other petrochemicals and organic raw chemicals (excluding those processes named following numbers 1300 and 1400)	2	g/h of product

H.8 The manufacture of polymers

code		units code	units
1800	The manufacture of thermoplasts, in general	2	g/h of product
1801	The manufacture of polyvinyl chloride	"	"
1802	The manufacture of polyethylene, high pressure process	"	"
1803	The manufacture of polyethylene, low pressure process	"	"
1804	The manufacture of polypropylene	"	"
1805	The manufacture of polystyrene	"	"
1806	The manufacture of polyacrylates	"	"
1807	The manufacture of polyethers	"	"
1808	The manufacture of polyesters (saturated)	"	"
1809	The manufacture of polyamides	"	"
1810	The manufacture of cellophane	"	"
1811	The manufacture of celluloid	"	"
1812	The manufacture of phenoplasts	"	"
1813	The manufacture of polyurethanes (without cross-linking)	"	"
1814	The manufacture of polytetrafluoroethylene (teflon)	"	"
1815	The manufacture of ABS (Acrylonitrile Butadiene Styrene)	"	"
1816	The manufacture of polycarbonates	"	"
1817	The manufacture of acetals (Delrin)	"	"
1849	The manufacture of other thermoplasts	"	"
1850	The manufacture of thermoharders, in general	2	g/h of product
1851	The manufacture of polyesters (unsaturated)	"	"
1852	The manufacture of polyurethane resins	"	"
1853	The manufacture of alkyd resins	"	"
1854	The manufacture of epoxy resins	"	"
1855	The manufacture of urea formaldehyde resins	"	"
1856	The manufacture of melamine formaldehyde resins	"	"
1857	The manufacture of phenol formaldehyde resins	"	"

		units code	units
1858	The manufacture of ebonite (isoprene + S-crosslinking)	2	g/h of product
1879	The manufacture of other thermoharders	"	"
1880	The manufacture of elastomers, in general	2	g/h of product
1881	The manufacture of butadiene styrene rubbers (Buna-S, SBR, GRS)	"	"
1882	The manufacture of neoprene	"	"
1883	The manufacture of butadiene nitryl rubber (Buna-N, Hycar, Perbunam)	"	"
1884	The manufacture of polybutadiene (Buna)	"	"
1885	The manufacture of silicon rubbers	"	"
1886	The mnaufacture of polyurethane rubbers	"	"
1887	The manufacture of ethene propene terpolymer (EPT)	"	"
1888	The manufacture of polyisoprene	"	"
1899	The manufacture of other elastomers	"	"

H.9 The manufacture of finished chemical products

code		units code	units
1900	The manufacture of pigments and dyes, in general	2	g/h of product
1901	The manufacture of organic dyes	"	"
1902	The manufacture of organic pigments	"	"
1903	The manufacture of inorganic pigments	"	"
1904	The manufacture of fillers by grinding of minerals	"	"
1905	The manufacture of synthetic fillers	"	"
1906	The manufacture of materials for the paint and printing ink industry	"	"
1907	The manufacture of painting material	"	"
1908	The manufacture of printing ink (not textile colourings)	"	"
1909	The manufacture of writing inks	"	"
1910	The manufacture of medical supplies and cosmetics in general	2	g/h of product
1911	The manufacture of medical supplies (chemical)	"	"
1912	The manufacture of medical supplies (biological)	"	"
1913	The making-up of medical supplies	"	"
1914	The making-up of cosmetics	"	"
1915	The manufacture of insecticides and other controls	"	"
1916	The making-up of insecticides, fungicides, etc. and other means of preservation	"	"
1920	The manufacture of washing and cleansing supplies, in general	2	g/h of product
1921	The manufacture of soap	"	"
1922	The manufacture of other surface-active materials	"	"
1923	The manufacture of washing supplies	"	"
1924	The manufacture of shining compounds and waxes	"	"
1925	The manufacture of cleansing liquids	"	"

code		units code	units
1950	The manufacture of other chemical products, in general (excluding the processes named in H.4 to H.8)	2	g/h of product
1951	The manufacture of scents and flavourings	"	"
1952	The manufacture of catalyzing agents	"	"
1953	The manufacture of activated charcoal	"	"
1954	The manufacture of other adsorbing and absorbing meterials	"	"
1955	The manufacture of light sensitive materials	"	"
1956	The manufacture of softeners	"	"
1957	The manufacture of stabilizers	"	"
1958	The manufacture of other supplies for the plastic and rubber processing industry	"	"
1959	The manufacture of supplies for the textile industry	"	"
1960	The manufacture of glues and adhesives (excluding nos. 2028,2034 and 2047)	"	"
1961	The manufacture of materials for the surface treatment of metals (e.g. stains, chroming and phosphating)	"	"
1962	The manufacture of explosives	"	"
1963	The manufacture of laboratory chemicals	"	"
1964	The manufacture of graphite	"	"
1990	The filling of chemical finished products in general	2	g/h of product
1991	The filling of spray cans	"	"
1992	The filling of other containers	"	"
1999	The manufacture of other chemical finished products	2	g/h of product

H.10 The manufacture of foodstuffs and luxury foods

code		units code	units
2000	The manufacture of foodstuffs and luxury foods, in general	2	g/h of product
2001	The slaughtering of ruminating animals and horses (for hogs see 2055)	"	"
2002	Slaughter of poultry	"	"
2003	Manufacture of meat products and canned meats	"	"
2004	Carving of meats	"	"
2005	Milk collection (including local centrifuge plant)	"	"
2006	Manufacture of milk powder	"	"
2007	Manufacture of milk for consumption and of milk products (excluding products listed in nos. 2006, 2008, 2009, 2010 and 2056)	"	"
2008	Manufacture of butter	"	"
2009	Manufacture of cheese	"	"
2010	Manufacture of ice cream	"	"
2011	Processing of fish	"	"
2012	Manufacture of meal	"	"
2013	Hulling of barley, rice, etc.	"	"
2014	Extraction and refining of sugar from sugar beets	"	"
2015	Refining of cane sugar	"	"
2016	Extraction of animal and vegetable oils and greases	"	"
2017	Processing of animal and vegetable oils and greases (excluding nos. 1653, 1910 and following, 1920 and following, 2018, 2019, and similar nos.)	"	"
2018	Manufacture of margarine	"	"
2019	Manufacture of mayonnaise, salad dressing, and similar products	"	"
2020	Manufacture of fruit and vegetable conserves	"	"
2021	Manufacture of deep-freeze fruits and vegetables	"	"
2022	Manufacture of bread and rusks	"	"
2023	Manufacture of fancy pastries	"	"
2024	Manufacture of biscuits	"	"
2025	Manufacture of cakes	"	"
2026	Processing of cocoa beans	"	"

		units code	units
2027	Manufacture of chocolates and sweets	2	g/h of product
2028	Manufacture of starch	"	"
2029	Manufacture of dextrin	"	"
2030	Manufacture of glucose (for lactose see no. 2056)	"	"
2031	Manufacture of potato flour	"	"
2032	Manufacture of other farine products	"	"
2033	Manufacture of mash	"	"
2034	Manufacture of gelatine and bone glues	"	"
2035	Manufacture of fish meal, bone meal, etc. (for annihilation see also no 2090)	"	"
2036	Manufacture of other animal feeds	"	"
2037	Manufacture of pastry products	"	"
2038	Roasting of coffee	"	"
2039	Packaging and blending of teas	"	"
2040	Manufacture of vinegar	"	"
2041	Manufacture of mustard	"	"
2042	Grinding of spices	"	"
2043	Manufacture of cake and pudding mixes	"	"
2044	Manufacture of raw materials for bakeries	"	"
2045	Manufacture of soup (canned or dried)	"	"
2046	Manufacture of flavourings	"	"
2047	Manufacture of potato products (excluding nos. 2031 and 2032)	"	"
2048	Manufacture of yeast and alcohol	"	"
2050	Manufacture of spirits	"	"
2051	Manufacture of malt	"	"
2052	Manufacture of beer	"	"
2053	Manufacture of carbonated beverages	"	"
2054	Processing of tobacco	"	"
2055	Slaughtering of hogs	"	"
2056	Manufacture of lactose (for glucose see no 2030)	"	"
2090	Annihilation operations	"	"
2091	Processing of intestines and slaughtering wastes not included in nos. 2090 and 2036)	"	"

H.11 Preparation of metals and the manufacture of metal products and machines

code			units code	units
2100	Preparation and shaping of metals, in general		2	g/h of total material minus recycling
2101	Manufacture of pig iron	for solid and liquid shaping see nos. following 2105	„	
2102	Manufacture of ferrometals		"	"
2103	Manufacture of aluminium		"	"
2104	Manufacture of other non-ferrometals		"	"
2105	Rolling of steel		5	Watts of installed power
2106	Rolling of aluminium		"	
2107	Rolling of other non-ferrometals		"	"
2108	Drawing of steel wire		"	"
2109	Drawing of copper wire		"	"
2110	Drawing of other metal wires		"	"
2111	Casting of iron and steel		2	g/h of total material minus recycling
2112	Casting of aluminium		„	
2113	Casting of other non-ferrometals		"	"
2114	Forging		5	Watts of installed power
2115	Processes involving tension and the release of tension		"	"
2116	Chemical milling		2	g/h of removed material
2117	Welding, cutting and joining processes (for gassing see the conversion table in "Metal Industry Effluent Factors")		5	Watts of installed power
2118	Powder sintering		2	g/h of product
2119	Preparation of forms and molds		2	g/h of forming material
2129	Other form-giving processes on metals		2/5	g/h or Watts
2130	The finishing of metal surfaces, in general (excluding plating)		2	g/h of product (see the conversion table in Metal Industry Effluent Factors)"
2131	Irradiation, sharpening and grinding		„	
2132	Hardening		"	
2133	Cleaning, de-greasing, staining, phosphating and chromating		"	"

		units code	units
2139	Other finishing treatments excluding plating	2	g/h of product (see the conversion table in Metal Industry Effluent Factors)
2140	The plating of metals and of other materials onto metal, in general	2	g/h of plated material
2141	The plating of metal layers onto metal (by galvanizing, dipping etc.)	"	"
2142	The plating of artificial materials onto metal	"	"
2143	The plating of enamel or other ceramic materials onto metal	"	"
2144	The application of paint onto metal	"	"
2149	The plating of other materials onto metal	"	"
2150	Assembly and construction of metal products and machines (for electrotechnical products see H.12)	2	g/h of product

H.12 Manufacture of electrotechnical products

code		units code	units
2200	Assembly of electrotechnical products, in general	2	g/h of product
2201	Production of electrical wire and cable (see also 2109 and 2140 and following)	"	"
2202	Assembly of electric motors, generators, transformers, switching and installation materials	"	"
2203	Manufacture of batteries and storage batteries	"	"
2204	Manufacture of incandescent bulbs, fluorescent bulbs and electron tubes, etc.	"	"
2205	Manufacture of transistors	"	"
2206	Manufacture of integrated circuits	"	"
2207	Manufacture of other electronic components	"	"
2208	Assembly of electronic apparatus	"	"
2299	Manufacture of other electrotechnical apparatus	"	"

H.13 Manufacture of construction materials, earthenware and glass

code		units code	units
2300	Manufacture of ceramic goods, in general	2	g/h of product
2301	Manufacture of coarse ceramic	"	"
2302	Raw material preparation for fine ceramics	"	"
2303	Manufacture of fine ceramics	"	"
2304	Glazing	"	"
2305	Enamelling	"	"
2319	Other ceramic processing	"	"
2320	Manufacture of non-ceramic construction materials, in general	2	g/h of product
2321	Manufacture of cement	"	"
2322	Manufacture of lime	"	"
2323	Manufacture of concrete products	"	"
2324	Manufacture of sand-lime brick	"	"
2325	Manufacture of asbestos cement goods	"	"
2326	Manufacture of gypsum wallboard	"	"
2327	Manufacture of concrete mortar	"	"
2328	Manufacture of rock wool	"	"
2329	Asphalt mixing installations	"	"
2349	Manufacture of other non-ceramic construction materials	"	"
2350	Manufacture of glass and glass products, in general	2	g/h of product
2351	Manufacture of plate glass	"	"
2352	Cardening of plate glass	"	"
2353	Manufacture of plate glass products	"	"
2354	Manufacture of hollow glass	"	"
2355	Manufacture of blown glass	"	"
2356	Manufacture of glass fibre	"	"
2357	Manufacture of glass wool	"	"
2358	Etching of glass	"	"
2369	Manufacture of other glass products (including enamelling and glazing)	"	"

H.14 Manufacture of fibres, textiles and textile goods

code		units code	units
2400	Manufacture of fibres, in general (see also nos following 1800)	2	g/h of product
2401	Manufacture of rayon	"	"
2402	Manufacture of other syntheric fibres out of solution	"	"
2403	Manufacture of synthetic fibres out of a smelt (e.g. nylon, polyester)	"	"
2409	Manufacture of other fibres (for glass fibre, see no. 2356)	"	"
2410	Manufacture of textiles, in general	2	g/h of product
2411	Texturing of fibres	"	"
2412	Washing of fibres	"	"
2419	Other processes on fibres	"	"
2420	Spinning (mechanical)	"	"
2421	Twisting	"	"
2422	Weaving	"	"
2423	Retting of flax	"	"
2424	Knitting	"	"
2425	Pre-treatments before further processing (pre-dressing)	"	"
2426	Bleaching	"	"
2427	Dyeing	"	"
2428	Pressing, printing	"	"
2429	Special pre-treatments before further processing (pre-dressing)	"	"
2449	Other textile treatments	"	"
2450	Manufacture of textile goods, in general	2	g/h of product
2451	Manufacture of carpet	"	"
2452	Manufacture of floor felting	"	"
2453	Manufacture of linoleum	"	"
2454	Manufacture of rush matting	"	"
2455	Manufacture of ready-made clothes	"	"
2456	Manufacture of felt and hats	"	"
2457	Manufacture of fibre membranes	"	"
2499	Manufacture of other textile goods	"	"

H.15 Manufacture of paper, paper goods, graphics materials and photo-developing installations

code		units code	units
2500	Manufacture of paper, in general	2	g/h of product
2501	Breakdown of wood (mechanical)	2	g/h of wood
2502	Breakdown of wood (semi-chemical)	"	"
2503	Breakdown of wood (chemical)	"	"
2504	Breakdown of old paper	2	g/h of old paper
2505	Bleaching of paper fibre	2	g/h of fibre
2506	Material preparation	2	g/h of material
2507	Papermachine	2	g/h of product
2508	Coating of paper	2	g/h of coating
2509	Cooking of the coating mass	"	"
2510	Manufacture of bulk carton and cardboard	2	g/h of product
2519	Other processes for the preparation of paper	"	"
2520	Manufacture of paper goods, in general	2	g/h of product
2521	Manufacture of paper bags	"	"
2522	Manufacture of carton boxes	"	"
2529	Manufacture of other paper goods	"	"
2530	Manufacture of graphic products, in general	8	cm^2/hr of paper
2531	Setting of lead type	7	no of symbols/hr
2532	Making of cliches	8	cm^2/hr of print
2533	Photographic setting	8	cm^2/hr of film or paper
2534	High pressure	8	cm^2/hr of paper
2535	Offset in sheets	"	"
2536	Rotation offset	"	"
2537	Flexodruk (Flexopress)	"	"
2538	Rotary photogravure	"	"
2539	Other printing procedures	"	"
2549	Other procedures in the printing business	"	"
2550	Photo-developing installations	8	cm^2/hr of film or paper

H.16 Processing of wood, synthetic materials, rubber, hides and leather

code		units code	units
2600	Processing of wood, in general	2	g/h of product
2601	Saw mills and planing mills	"	"
2603	Manufacture of triplex (plywood), veneer, woodfibre board etc.	"	"
2604	Manufacture of other products from wood	"	"
2606	Painting and spraying of wood	2	g/h of paint and preserving material
2607	The preserving of wood by other means	2	g/h of preserving material
2619	Other wood treatments	2	g/h of product
2620	Processing of synthetic materials, in general	2	g/h of product
2621	Pre-preparation of synthetic materials	"	"
2622	Shaping of synthetic materials	"	"
2639	Other processing of synthetic materials	"	"
2640	Processing of rubber, in general	2	g/h of product
2641	Pre-preparation of rubber	"	"
2642	Processing of latex	"	"
2643	Manufacture of rubber tires	"	"
2644	Re-treading of rubber tires	7	no. of rubber tires per hour
2659	Manufacture of other rubber products	2	g/h of product
2660	Processing of hides and leather, in general	2	g/h of product
2661	Pre-preparation of hides	"	"
2662	Vegetable tanning	"	"
2663	Chromium tanning	"	"
2664	Train oil tanning	"	"
2665	Tanning of pelts	"	"
2666	Painting of leather	"	"
2667	Manufacture of shoes	7	no. of pairs per hour
2679	Manufacture of other leather goods	2	g/h of product

H.17 Miscellaneous manufacturing activities

code		units code	units
2700	Any other unnamed manufacturing processes	2	g/h of product

H.18 Supporting industries

code		units code	units
2900	Supporting industries, in general	2/6	g/h or no. of workers
2901	Laundries	2	g/h of wash
2902	Chemical cleaning of clothing and other textile goods	2	g/h of clothing
2903	Dyeing of clothing and other textile goods (not industrial)	2	g/h of clothing
2904	Cleansing and decontamination concerns	6	no. of employees
2905	Cleaning concerns	"	"
2999	Other supporting industries	2/6	g/h or no.of employees

I. KINDS OF APPARATUS

This code is divided into the following groups and subgroups:

I 1. Technical processing apparatus
  - separating apparatus
  - reducing apparatus
  - agglomeration and priming apparatus
  - mixers
  - evaporators
  - crystallizers
  - heat exchangers, cooling apparatus, pasteurizers, etc.
  - processing tanks and reservoirs, and electrolysis cells
  - fittings
  - closing flanges

I 2. Storage, transport, filling, rinsing and analysis apparatus
  - storage facilities
  - transporting apparatus
  - filling and rinsing apparatus
  - analysis apparatus

I 3. Waste water treatment apparatus
  - mechanical
  - chemical
  - biological

I 4. Ovens, power generating apparatus, burners and smoke generators
  - ovens
  - Power generating apparatus
  - burners
  - smoke generators

I 5. Shaping apparatus

- cutting processes
- non-cutting processes
- foundry apparatus
- welding and cutting apparatus
- spinning apparatus

I 6. Surface treatment apparatus

- Cleaning, de-greasing and staining apparatus
- chromating, phosphating, etc.
- Hardening apparatus
- lacquering and painting apparatus
- enamelling apparatus
- plating of metal layers
- plating of synthetic material and rubber layers
- other apparatus for the treatment of surfaces

I 7. Textile machines

- Spinning apparatus
- weaving apparatus
- machines for the finishing and improvement of textiles
- machines for the ready-made industry

I 1. Technical processing apparatus

code		units code	units
5000	Sieve (dry)	2	g/h of supply
5001	Sieve (wet)	"	"
5002	Wind sifting	"	"
5003	Flotation apparatus	"	"
5004	Electrostatic separator	"	"
5005	Magnetic separator	"	"
5009	Other solid-solid separator	"	"
5010	Filter press	4	1/h of supply
5011	Vacuum filter	"	"
5012	Rotating vacuum filter	"	"
5013	Ribbon filter	"	"
5014	Cloth filter	"	"
5015	Mat filter	"	"
5019	Other filtration apparatus	"	"
5020	Centrifuge	4	1/h of supply
5021	Decanter	"	"
5022	Hydrocyclone	"	"
5023	Settling tank	"	"
5029	Other liquid-liquid and liquid-solid separating apparatus (excluding nos. 5060 to 5079)	"	"
5030	Settling chamber	4	1/h of supply
5031	cyclone	"	"
5032	Dry steam separator	"	"
5033	Electrofilter	"	"
5034	Washing towers (as material or droplet catchers; for gas scrubbers see no. 5063)	"	"
5035	Venturi washer	"	"
5039	Other gas-liquid and gas-solid separating apparatus (excluding nos. 5060 to 5079)	"	"

code	units code	units
5040 Pressing apparatus	2	g/h of supply
5050 Drying chamber	5	Watts available for evaporation
5051 Tumbling dryer	"	"
5052 Atomizing dryer	"	"
5053 Fluid bed dryer	"	"
5054 Pneumatic dryer	"	"
5055 Tunnel dryer	"	"
5059 Other drying apparatus	"	"
5060 Distillation column	4	l/h of liquid supply
5061 Extraction apparatus for solid matter extraction	4	l/h of solid supply
5062 Extraction apparatus for liquid/liquid extraction	4	l/h of supply of liquid to be extracted
5063 Absorption and desorption apparatus (liquid-gas)	4	l/h of gas supply (for absorption) 1)
	4	l/h of gas product (for desorption) 1)
5070 Adsorption apparatus (liquid-solid or gas-solid)	4	l/h of supply
5071 Ion exchange column	"	"
5072 Molecular filter column	"	"
5073 Electrodialysis apparatus	"	"
5074 Ultra and hyper filtration apparatus	"	"
Reducing apparatus		
5100 Breaking machines	2	g/h of supply
5101 Grinding machines, dry	"	"
5102 Grinding machines, wet	"	"
5103 Cutting machines	"	"
5109 Other reducing apparatus	"	"
Agglomeration apparatus and priming apparatus		
5120 Briquetting machines	2	g/h of supply
5121 Priming towers	"	"
5129 Other agglomeration apparatus	"	"

1) at normal temperature and pressure

code		units code	units
5130	Open mixers	4	1/h of supply
5131	Closed mixers	"	"
5132	Kneading machines	"	"
5133	Emulsifying and dispersing apparatus	"	"
5134	Rolling (for mixing e.g. for paint and rubber ingredients)	"	"
5135	Foam machines	"	"
5139	Other mixing apparatus	"	"
5140	Evaporators	4	1/h of supply
5150	Crystallizers	2	g/h of supply
	Heat exchangers, cooling apparatus, pasteurizers, etc.		
5160	Cooling towers	5	Watts of exchanged heat
5161	Cooling machines	"	"
5162	Cooling basins	"	"
5163	Mixing condensor	"	"
5164	Closed heat exchanger (including streaming pasteurizers etc.)	"	"
5165	Pasteurizers and sterilizers (for packaged materials)	"	"
5169	Other heat exchangers	"	"
	Processing tanks and reservoirs, and electrolysis cells		
5170	Open with stirrer	3	1 of useful contents
5171	Open without stirrer	"	"
5172	Closed with stirrer	"	"
5173	Closed without stirrer	"	"
5174	Electrolysis cell (not for surfacetreatment; see no 5600 and following for this)	"	"
5180	Fittings, in general	0	no statement
5181	Barrier or tap	"	"
5182	Safety valve	"	"
5183	Breaking plate	"	"
5184	Condensing pot	"	"
5189	Other fittings	"	"
5190	Closing flanges in general(i.e. flanges for processing apparatus and pipe connections)	9	cm of circumference

I.2 Storage, transport, filling, rinsing and analysis apparatus

code		units code	units
5200	Gas container, gas cylinder	3	l of useful volume
5201	Tank for liquid gas	"	"
5202	Open tank	"	"
5203	Completely closed tank	"	"
5204	Atmospheric tank with a fixed lid (without vents)	"	"
5205	Tank with a fixed lid with under and over pressure vents	"	"
5206	Tank with a moving lid	"	"
5207	Tank with a solid lid and internal moving lid	"	"
5208	Tank with a fixed lid and covered with "small spheres"	"	"
5209	Tank for liquids with a variable evaporation space	"	"
5210	Vat storage	3	l of normally useful volume
5211	Open cargo storage area	"	"
5212	Closed cargo storage area (e.g. silos)	3	l of useful volume
5213	Bag storage	"	"
5219	Other storage	"	"

Transporting apparatus

code		units code	units
5220	Ditch (gravity)	2	g/h of material
5221	Transporter	"	"
5222	Transporting channel (pneumatic)	"	"
5223	Open rain water or rinsing water ditch	0	no statement
5224	Pump (liquids)	4	l/h of liquid
5225	Compressor	4	l/h of gas 1)
5226	Ventilator	"	"
5227	Vacuum pump (including steam injectors)	"	"
5228	Transporting mechanism	3	l of useful volume
5239	Other transporting apparatus	2/4	g/h or l/h of material

Filling and rinsing apparatus

code		units code	units
5240	Filling apparatus for solid materials	2	g/h of solid matter
5241	Filling apparatus for liquids	4	l/h of liquid
5242	Filling apparatus for gases	4	l/h of gas 1)
5243	Rinsing apparatus (such as bottle rinsing machines)	4	l/h of washing liquid
5260	Analysis apparatus	0	no statement

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1) at normal temperature and pressure

2) for internal transport use modes 20 to 29, for effluents. For effluents from external transport (of raw materials, of product etc.) use effluent mode 30 to 39.

I.3 Waste water treatment apparatus

code		units code	units
5300	Mechanical waste water treatment apparatus	4	1/h of waste water
5301	Grill for coarse wastes	"	"
5302	Sand catcher or settling tank	"	"
5303	Grease or oil separator (not 5304, 5305, or 5306)	"	"
5304	API-separator	"	"
5305	Corrugated Plate Interceptor	"	"
5306	Flotation apparatus	"	"
5309	Other mechanical waste water treatment apparatus	"	"
5310	Chemical waste water treatment apparatus	4	1/h of waste water
5311	Coagulator/flocculator	"	"
5312	Neutralization tank (treatment with alkali or acids)	"	"
5313	Poison removal tank (treatment with oxidation or reduction methods)	"	"
5319	Other chemical waste water treatment apparatus	"	"
5320	Biological waste water treatment apparatus	4	1/h of waste water
5321	Oxidation bed	"	"
5322	Active mud tank	"	"
5323	Oxidation trench	"	"
5329	Other biological waste water treatment apparatus	"	"

I.4 Ovens,power generating apparatus, burners and smoke generators

code			units code	units
	Ovens			
5400	Blast furnace		2	g/h
5401	Flame oven	of product for non-metallurgical processes or of total raw material minus re-cycling for metallurgical processes	"	"
5402	Tunnel oven		"	"
5403	Muffel furnace		"	"
5404	Electric oven		"	"
5405	Reaction furnace		"	"
5406	Gas generator		4	l/h
5407	Martin oven		2	g/h
5408	Oxy-steel oven		"	"
5409	Thomas oven		"	"
5410	Chamber oven		"	"
5411	Drum oven		"	"
5460	Raster oven		"	"
5461	Tumbling oven		"	"
5462	Oven with a fluidized bed		"	"
5463	Stage oven		"	"
5419	Other ovens		"	"
	Power generating apparatus			
5420	Gasoline motor		5	Watt of useful power
5421	Diesel motor		"	"
5422	Wankel engine		"	"
5423	Gas turbine		"	"
5434	Steam turbine		"	"
5439	Other power generating apparatus		"	"
	Burners			
5440	Raster burner		5	Watt of useful power
5441	Powdered coal burner		"	"
5442	Evaporation burner (oil)		"	"
5443	Pressure atomization burner (oil)		"	"
5444	Steam or air atomization burner (oil)		"	"
5445	Rotating atomization burner (oil)		"	"

code		units code	units
5446	Atmospheric gas burner	5	Watt of useful power
5447	Ventilator gas burner	"	"
5459	Other burners	"	"
5470	Smoke generators, in general	2	g/h of fuel
5471	Open flame generator	"	"
5472	Glowing generator	"	"
5473	Condensing generator	"	"

I.5 Shaping apparatus

code		units code	units
5500	Cutting processes, in general	5	Watt of installed power
5501	Lathe	"	
5502	Saw	"	"
5503	Drill	"	"
5504	Shaving machine	"	"
5505	Sharpening machine	"	"
5506	Milling cutter	"	"
5507	Cutter	"	"
5519	Other machines for straining work	"	"
5520	Non-cutting processes, in general	5	Watt of installed power
5521	Rolling machine	"	
5522	Wire pulling machine	"	"
5523	Deep drawing machine	"	"
5524	Extrusion machine for metals	"	"
5525	Forcing machine	"	"
5526	Pressing machine	"	"
5527	Punching machine	"	"
5528	Forging machine		
5529	Vacuum forming machine	2	g/h of supply
5530	Calander	"	"
5531	Extruder for synthetic materials, rubber, etc.	"	"
5539	Other stressing operations	5/2	Watt or g/h
5540	Foundry apparatus, in general	2/3	g/h or 1 of supply
5541	Foundry bed	3	1 of supply
5542	Coquille	"	"
5543	Shaping chamber	"	"
5544	Spraying foundry machine	2	g/h of supply
5549	Other foundry apparatus	2/3	g/h or 1 of supply

code		units code	units
5550	Welding and cutting apparatus, in general	5	Watt 1)
5551	Resistance welding	"	"
5552	Flame arc welding	"	"
5553	Argon arc welding	"	"
5554	Other forms of electrical welding, cutting and gouging	"	"
5555	Acetylene welding and cutting	"	"
5559	Other welding and cutting methods	"	"
5560	Spinning apparatus (see also 5700 and following)	2	g/h of product
5561	Spinning head	"	"
5562	Spinning bed	"	"
5569	Other spinning apparatus (see also nos. 5700 and following)	"	"

1) For gases refer to "Effluent Factors for the Metal Industry".

I.6 Surface treatment apparatus

code		units code	units
5600	Cleaning, de-greasing and staining apparatus, in general	2/3	g/h of cleaning material or l of bath contents
5601	Cleaning and de-greasing baths	3	l of bath contents
5602	Vapour de-greasing apparatus	2	g/h of de-greaser
5603	Steam radiation apparatus	2	g/h (steam + water)
5604	Other cleaning apparatus (except rinsing baths)	2/3	g/h of cleaning material or l of bath contents
5605	Staining baths	3	l of bath contents
5606	Rinsing bath (with water)	3	"
5610	Bombardment apparatus, in general	2	g/h of grit, etc.
5611	Apparatus for the bombardment with steel grit, steel shot, cast iron shot, and cast iron grit	"	"
5612	Apparatus for the dry bombardment with ceramic or mineral bombarding means (material)	"	"
5613	Apparatus for the wet bombardment with ceramic or mineral bombarding means (material)	"	"
5614	Bombardment with other means (material)	"	"
5616	Chromating, phosphating etc., in general	2/3	g/h of material or l of bath contents
5617	Chromating baths	"	"
5618	Phosphating apparatus	"	"
5620	Hardening apparatus, in general	3/5	l or Watt
5621	Hardening bath, oil	3	l of bath contents
5622	Hardening bath, cyanide	"	"
5623	Hardening bath, salt	"	"
5624	Hardening oven	5	Watt of installed power
5629	Other hardening apparatus	3/5	l or Watt
5630	Lacquering and painting apparatus, in general	2	g/h of paint and thinning material
5631	Lacquering and painting spraying apparatus, pneumatic	"	
5632	Lacquering and painting spraying apparatus, airless	"	"
5633	Lacquering and painting spraying apparatus, electrostatic	"	"
5634	Paint powder spraying apparatus, electrostatic	"	"

code		units code	units
5635	Paint powder whirlwind sintering apparatus	2	g/h of paint and thinner
5636	Paint immersion apparatus	"	"
5637	Paint pouring apparatus	"	"
5638	Lacquer rollers (roller coaters)	"	"
5644	Other apparatus for painting/lacquering	"	"
5645	Enamelling apparatus, in general	2	g/h of enamel consumption
5646	Enamel spraying apparatus	"	"
5647	Enamel immersion apparatus	"	"
5649	Other apparatus for enamelling	"	"
5650	Apparatus for the addition of metal layers, in general	2	g/h of plated metal
5651	Apparatus for thermal zincing	"	"
5652	Apparatus for electrolytic zincing	"	"
5653	Apparatus for sherardization	"	"
5654	Apparatus for the spraying of zinc	"	"
5655	Apparatus for thermal aluminizing	"	"
5656	Apparatus for the spraying of aluminium	"	"
5657	Apparatus for thermal tinning (immersion tinning)	"	"
5658	Apparatus for electrolytic tinning	"	"
5659	Apparatus for galvanic nickelling	"	"
5660	Apparatus for galvanic chroming	"	"
5661	Apparatus for galvanic silvering	"	"
5662	Apparatus for chemical, non-galvanic plating	"	"
5669	Other apparatus for the plating of metal layers	"	"
5670	Apparatus for the plating of synthetic material and rubber layers, in general	2	g/h of plated material
5671	Immersion apparatus for the plating of synthetic materials or rubber layers	"	"
5679	Other apparatus for the plating of synthetic materials or rubber layers	"	"
5699	Other apparatus for the treatment of surfaces	"	"

I.7 Textile Machines

Any effluents from supporting machinery should be recorded as coming from the supporting machine in question.

code		units code	units
5700	Spinning apparatus, in general	2	g/h of fibre
5701	Opener	"	"
5702	Mixing room	"	"
5703	Texturing machine	"	"
5709	Other spinning machines	"	"
5710	Weaving apparatus, in general	2	g/h of thread
5711	Thread steaming apparatus	"	"
5712	Strengthening machine	"	"
5713	Knitting machine	"	"
5714	Machine for the manufacture of membrane materials	2	g/h of fibre
5715	Machine for the manufacture of tufted carpet	"	"
5716	Machine for electrostatic linting	"	"
5719	Other machines in the weaving and knitting business	2	g/h of fibre or thread
5720	Machines for the finishing and improvement of textiles, in general	2	g/h of fibre, thread,fabric, etc.
5721	Pre-preparation in the improvement, in general	"	"
5722	Singing machine	"	"
5723	Cooking machine	"	"
5724	Finishing cooking machine	"	"
5725	Washing machine for loose fibres	"	"
5726	Apparatus for the extraction of fibres (organic solutes)	"	"
5727	Washing machine for porous fabrics	"	"
5728	Carbonizing machine	"	"
5729	Drying machine	"	"
5730	Mercerizing machine	"	"
5731	Apparatus for bleaching treatment	"	"
5739	Other pre-preparation machines	"	"

code		units code	units
5740	Dyeing machines, in general	2	g/h of fibres, threads, fabrics, etc.
5741	Dyeing machines for loose material, lots or threads	"	
5742	Dyeing machine for fabrics	"	"
5743	Dyeing machine for carpets and/or ready-made goods	"	"
5744	Foulard	"	"
5749	Other apparatus used for dyeing	"	"
5750	Printing machines, in general	2	g/h of fibres, threads, fabrics, etc.
5751	Film printing machines	"	"
5752	Rouleaux printing machine	"	"
5753	Machine for transfer printing	"	"
5759	Other apparatus for printing	"	"
5760	Special improvement processes, in general	2	g/h of fibres, threads, fabrics, etc.
5761	Machines for impregnating and coating	"	"
5762	Thermofixing	"	"
5763	Roughing, shaving and brushing machines	"	"
5769	Other improvement machines	"	"
5770	Machines for the ready-made industry	"	"

J. UNITS OF CAPACITY

0	not specified
1	g
2	g/h
3	l
4	l/h (for gases at STP)
5	Watt
6	number
7	number/hour
8	cm^2/h
9	cm

K. RECORDING AGENCY

This is the agency that completes the questionnaire form:

1.TNO (obtain from the identification number)
2 Ministry of Public Health and Environmental Hygiene
3 RIZA
4 Province
5 Water jurisdiction
6 Purification jurisdiction
7 Municipality
8 TNO (obtain from the identification number)
9 TNO (obtain from the identification number)

L. KINDS OF AIR POLLUTION SOURCES

1. Chimney or pipe with a vertical stream flow (without a cap or something similar)
2. Chimney or pipe without a vertical stream flow
3. Other effluents from installations (not from buildings)
4. Effluents from buildings, other than from chimnies or pipes

M. KINDS OF WATER POLLUTION SOURCES

1 Direct discharge into surface level watercourses

2 Secondary discharge into surface level watercourses by means of minor watercourses not listed in code list O.

3 Direct discharge onto land (e.g. by distribution over the land or through seepage).

4 Direct discharge into deep wells

5 Indirect discharge into municipal sewage systems

6 Indirect discharge into the water transport system of a purification jurisdiction

7 Indirect discharge into water purification installations within the plant itself

8 Indirect discharge to another plant

N. **PURIFICATION JURISDICTION** (refer to the map on page N - 2)

00 Not applicable (i.e. because of discharge into the Federal Water system or because of indirect discharge, except in the case of discharge into an installation of the local water purification jurisdiction)

Limburg

01	Limburg

Zuid-Holland

12	Rijnland
13	Woerden
14	Delfland
15	Schieland
16	Krimpenerwaard
17	Dijkring IJsselmonde
18	Nederwaard
19	Overwaard
20	Vijfheerenlanden
28	Dordtse Waard
29	Dijkring Hoekse Waard
30	Brielse Dijkring
31	Flakkee
32	Goeree

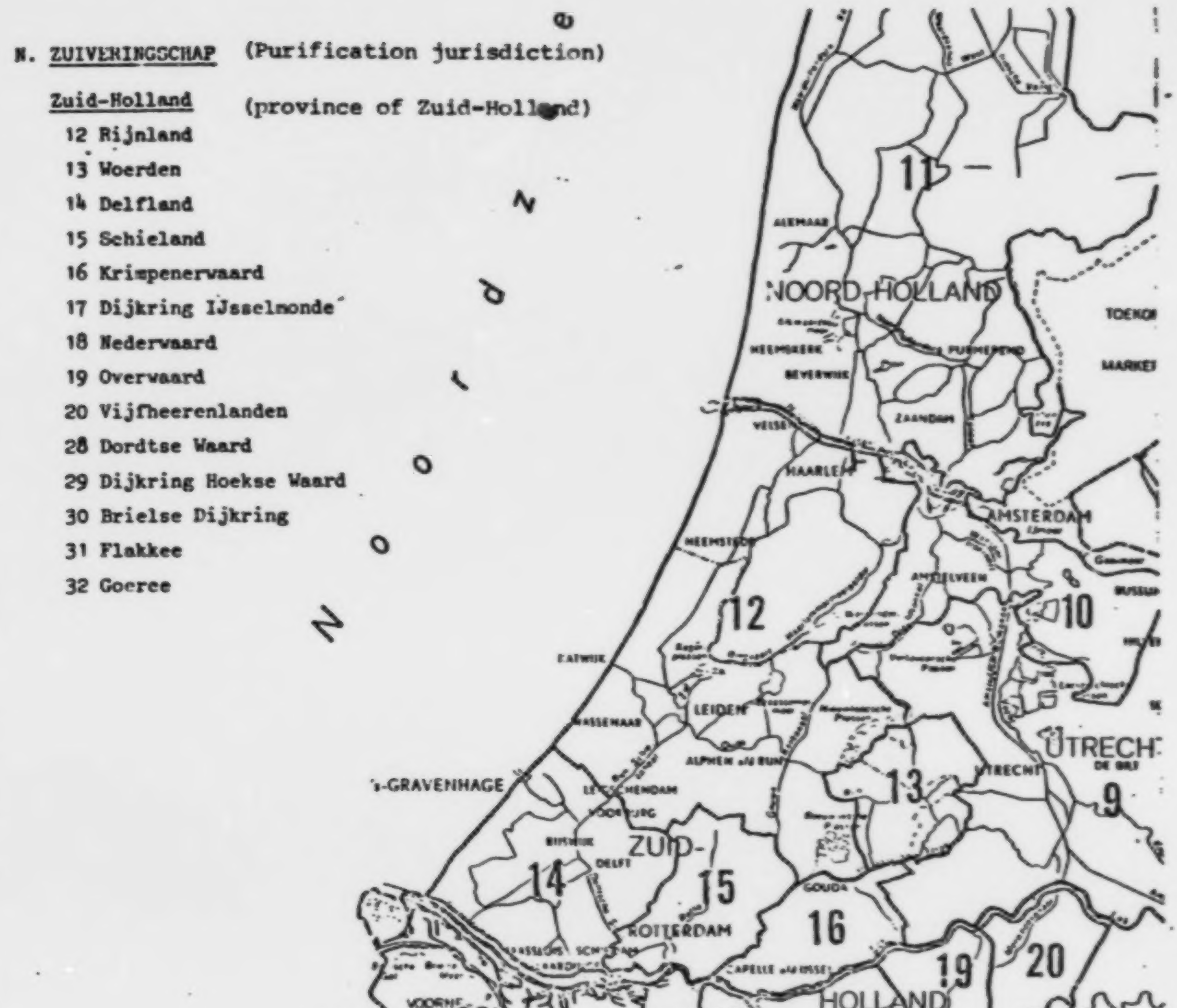
N-2

N-2

N. **ZUIVERINGSCHAP** (Purification jurisdiction)

Zuid-Holland (province of Zuid-Holland)

12 Rijnland
13 Woerden
14 Delfland
15 Schieland
16 Krimpenervaard
17 Dijkring IJsselmonde
18 Nedervaard
19 Overwaard
20 Vijfheerenlanden
28 Dordtse Waard
29 Dijkring Hoekse Waard
30 Brielse Dijkring
31 Flakkee
32 Goeree


Noordzee
NOORD-HOLLAND
ALKMAAR
HEEMSKERK
BEVERWIJK
PURMEREND
ZAANDAM
VELSEN
HAARLEM
AMSTERDAM
HEEMSTEDE
AMSTELVEEN
KATWIJK
LEIDEN
WASSENAAR
ALPHEN a/d RIJN
UTRECHT
DE BILT
's-GRAVENHAGE
LEIDSCHENDAM
VOORBURG
RIJSWIJK
DELFT
ZUID-HOLLAND
GOUDA
ROTTERDAM
SCHIEDAM
VLAARDINGEN
CAPELLE a/d IJSSEL
VOORNE
SPIJKENISSE
PUTTEN
RIDDERKERK
GORINCHEM
HOEKSCHE WAARD
OVERFLAKKEE
SCHOUWEN-DUIVELAND
NOORD-BEVELAND
THOLEN
WALCHEREN
MIDDELBURG
VLISSINGEN
GOES
ZEELAND
ZUID-BEVELAND
ZEEUWSCH-VLAANDEREN
TERNEUZEN
BERGEN OP ZOOM
ROOSENDAAL
OOSTERHOUT
BREDA
TILBURG
NOORD-
TOEKOMST
MARKEN
BUSSUM
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februari 1976

O. COLLECTING SURFACE LEVEL WATERCOURSES

For a rough indication of the locations of the watercourses listed below, refer to the map given on page O-3.

If effluent is released into a watercourse that is not given in the list below, then the collecting watercourse must be considered to be the water course into which the former watercourse flows. The position of the effluent source is them given as the position of the mouth of the watercourse where it enters the watercourse given in the list below. In the case where the unlisted watercourse feeds two or more named watercourses and if there is no preferential current direction, then the watercourse lying closest to the discharge point is taken as the watercourse of record.

Those watercourses labelled by (R) are supervised as to quality by the federal government.

OPPERVLAKTEWATEREN ZUID-LIMBURG

(Surface level watercourses in the province of Zuid-Limburg)

0001	Maas (R)
0003	Voer
0004	Noor of Langwater (bij Noorbeek)
0005	Albertkanaal
0006	Jeker
0007	Zuid-Willemsvaart (R)
0009	Julianakanaal (R)
0010	Nieuwe Kanjelbeek
0011	Watervalderbeek
0012	Geul
0013	Oude Kanjelbeek
0014	Strabekervloedgraaf
0015	Scheumerbeek
0016	Eyserbeek
0017	Wittemermolentak
0018	Gulp

bij = near
kanaal = canal

vaart = canal

beek = brook

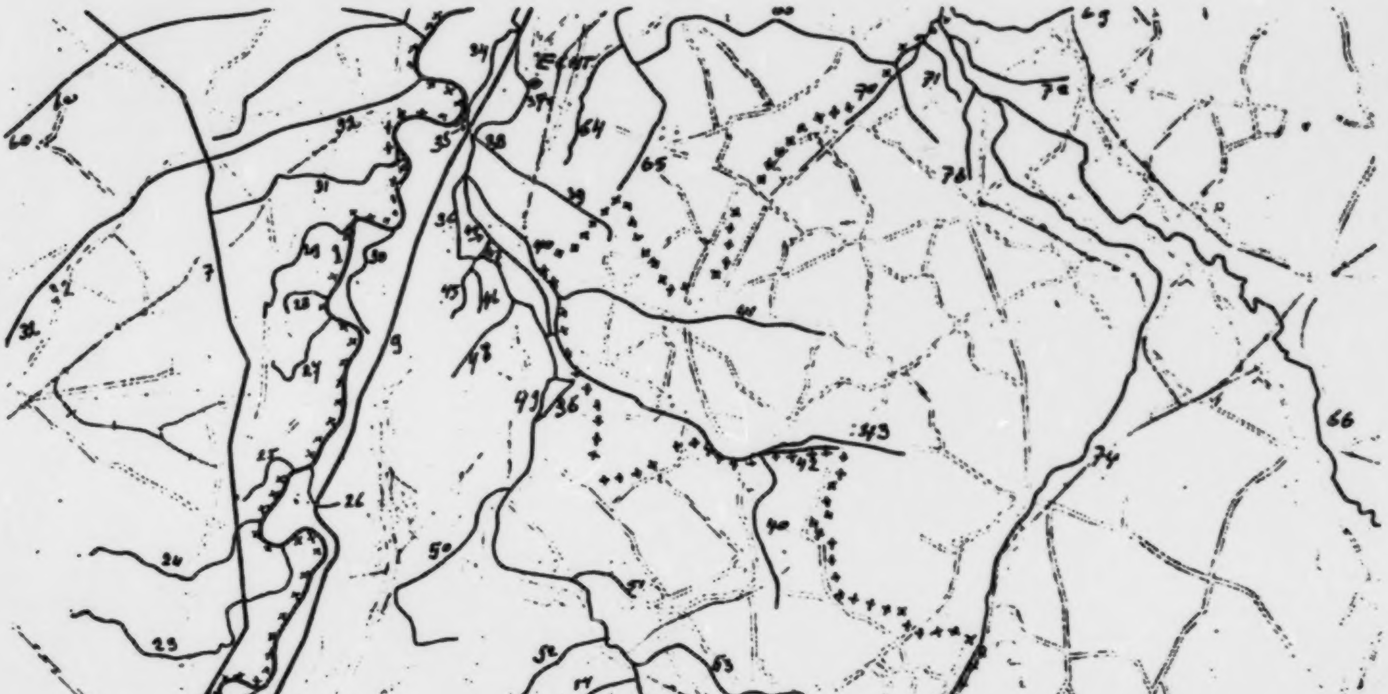
0019	Vosgrub
0020	Selzerbeek
0021	Mechelderbeek
0022	Terzieterbeek
0026	Ur
0030	Kingsbeek
0034	Oude Maas (Limburg)
0035	Groenbeek
0036	Geleenbeek
0037	Echtermolenbeek
0038	Canjelbeek
0039	Middelsgraaf
0040	Roode Beek
0042	Rigal-Bach
0044	Vloedgraaf (bij Susteren)
0045	Venkebeek
0046	Lindbeek
0047	Afslag
0048	Limbrichterbeek
0049	Kötelbeek
0050	Keutelbeek
0051	Kakkert
0052	Platsbeek
0053	Caumerbeek
0054	Hulsbergerbeek
0055	Retersbeek
0056	Voerendaalsche Beek
0074	Wurm
0075	Anselderbeek
0076	Strijthagerbeek
0077	Vloedgraaf (bij Kaalheide)
0078	Bleyerheidensche Beek

februari 1976

KAART VAN DE OPPERVLAKTEWATEREN IN ZUID-LIMBURG

(Map of the surface level watercourses in the province of Zuid-Limburg

0-3.


RIJKSWATERSTAAT
WATERSTAATSKARTOGRAFIE
1974

FEDERAL DEPARTMENT OF BUILDINGS AND ROADS (cartography division)

februari 1976

(Surface level watercourses in the province of Zuid-Holland)

Oppervlaktewateren in de provincie Zuid-Holland

(Buitenwateren, boezemwateren, polderwateren en inlaatleidingen)

(Voor alfabetische lijst zie pag. 0-18 e.v.)

(external watercourses, polder reservoir waters, polder watercourses and connecting watercourses -- for an alphabetic list see pages 0-18 and following pages)

Buitenwateren

(externally flowing watercourses)

0151 Noordzee (R) (North Sea)
0152 Nieuwe Waterweg (incl. Het Scheur) (R)
0153 Nieuwe Maas (R)
0154 Hollandsche IJssel (R)
0155 Lek (R)
0156 Noord (R)
0157 Oude Maas (R)
0158 Beneden-Merwede (R) beneden = lower
0159 Boven-Merwede (R) boven = upper
0160 Spui (R)
0161 Dordtsche Kil (R)
0162 Wantij (R)
0163 Calandkanaal (R) kanaal = canal
0164 Haringvliet (incl. Vuile of Hitsertsche Gat) (R) of = or
0165 Hollandsch Diep (R)
0166 Nieuwe Merwede (R)
0167 Krammer (R)
0168 Volkerak (R)

Boezemwateren (polder reservoir waters)

0169 Haarlemmer-Trekvaart
0170 Hillegommerbeek beek = brook
0171 Schulpvaart vaart = canal
0172 Steengrachtkanaal
0173 Schippersvaart
0174 Schipperssloot sloot = ditch
0175 Zanderijvaart
0176 Vogelsloot
0177 Fagel- of Vogelsloot

februari 1976

0178 Dinsdagsche Watering watering = watercourse

0179 Woensdagsche Watering

0180 Maandagsche Watering

0181 Oegstgeesterkanaal

0182 Oosteindervaart

0183 Weerlanervaart

0184 Vossevaart

0185 Elsbroekervaart

0186 Venenburg-Elsbroekkanaal

0187 Lisserbeek

0188 Haven van Lisse

0189 Ringsloot (Lisse-Sassenheim)

0190 Mallegat (Lissermallegat)

0191 Sassenheimervaart

0192 Zandsloot

0193 Poelmeer

0194 Warmonder-Leede

0195 Groote Sloot

0196 Stinksloot (ten Noorden van Leiden) (to the north of Leiden)

0197 Leidsche Vaart

0198 Zijl

0199 Kagerplassen (Dieperpoel, Norremeer, Warckerlee, Spriet,
Laeck, Eymerspoel, Zweiland, Spijkerboor,
Kever, Sever, Balgerij)

0200 Zijp plassen = small lakes

0201 Vennemeer

0202 Bockhorstvaart

0203 Zevenhuizervaart

0204 Zomersloot

0205 Stingsloot (ten Zuiden van Oud Ade)

0206 Vaarsloot

0207 Oude Ade

0208 Akkersloot

0209 Achterwetering

0210 Zuidzijdervaart

0211	Dwarswatering
0212	Kokwatering
0213	Does
0214	Bruine-wetering
0215	Kromme Does
0216	Spijkersloot
0217	Rijpwetering
0218	Koppoel
0219	Kickpoel
0220	Ade
0221	Hanepoel
0222	Oude Wetering (bij Oude-Nieuwe Wetering)
0223	Drecht
0224	Braassemermeer
0225	Wijde Aa
0226	Ofwegenerwatering
0227	Woudwetering of
0228	Heimanswetering
0229	Molensloot
0230	Lagewaardsche Rijn
0231	Kromme Aar
0232	Aarkanaal
0233	Katwijksche Kanaal
0234	Additionele Kanaal
0235	Rijn
0236	Galgewater
0237	Nieuwe Rijn
0238	Oude Rijn
0239	Kleine Watering
0240	Dijkwatering
0241	Groote of Valkenburgsche Watering
0242	Kaswatering
0243	Zijlwatering
0244	Wassenaarsche Watering
0245	Slotwatering

0246	Korte Watering
0247	Veenwatering
0248	Dobbewatering
0249	Korte of Waddinger Vliet
0250	Rijn-Schiekanaal
0251	Vliet (ten Noorden van Leidschendam)
0252	Vlietland
0253	Meerburger Watering
0254	Vrouwenvaart
0255	Zuid-Buurtsche Watering
0256	Stompwijksche Vaart
0257	Nieuwe Vaart (bij Stompwijk)
0258	Ommedijksche Watering
0259	Meer- of Buurwatering
0260	Elleboogsche Watering
0261	Noord-Aa
0262	Weipoortsche Vliet
0263	Oostvaart
0264	Gouwe
0265	Otwegwetering
0266	Nw. Scheepvaart Kanaal
0267	Enkele Wiericke
0268	Dubbele Wiericke
0269	Grecht
0270	Kromwijkerwetering
0271	Jaap-Bijzerwetering
0272	Zuidvliet
0273	Delftsche Vliet
0274	Haagsche Vliet of Trekvaart
0275	Afvoerkanaal
0276	Laakhaven
0277	Laakkanaal
0278	Escampkanaal
0279	Loosduinsche Vaart
0280	Lange Laak

0281	Korte Laak
0282	Nieuwe Vaart (ten Noorden van Poeldijk)
0283	Boomawatering
0284	Wennetjessloot
0285	Holle Watering
0286	Gantel
0287	Groote Gantel
0288	Monstersche Vaart
0289	Oude Vlot of Vlotwatering
0290	Nieuwe Vaart (bij 's-Gravenzande)
0291	Poelwatering
0292	Naaldwijksche Vaart
0293	Boschsloot
0294	Loopend Gat
0295	Strijp
0296	Zwethkanaal
0297	Zweth
0298	Lange Watering
0299	Wateringsche Vaart
0300	Korte- of Reynerwatering
0301	Dulder
0302	Kerstanje
0303	Pijnackersche Vaart
0304	Look
0305	Lots- of Harnaschwatering
0306	Gaag
0307	Groeneveldsche- of Monsterwatering
0308	Zijde
0309	Leê- of Lierwatering
0310	Breêlee
0311	Leewater
0312	Nieuwe Water
0313	Westgaag of Spartelvaart
0314	Oostgaag
0315	Zuidgaag

0316	Middelwatering
0317	Breê- of Lichtvoetswatering
0318	Noordvliet
0319	Middelvliet
0320	Boonervliet
0321	Vlaardingervaart
0322	Delftsche Schie
0323	Berkelsche Zweth
0324	Schiedamsche Schie
0325	Delfshavensche Schie
0326	Schie-Schiekanaal
0327	Rotterdamsche Schie
0328	Noorderkanaal
0329	Bovenvaart of Molenwatering
0330	Rodenrijsche Vaart
0331	Rotte
0332	Bleiswijksche Meren
0333	Ringvaart (ten Zuiden van Schiebroek)
0334	Bergsche Achterplas
0335	Bergsche Voorplas
0336	Ringvaart van de Zuidplaspolder
0337	Hennipsloot
0338	Ringvaart van de Polder Prins Alexander
0339	Molenwetering
0340	Gekanaliseerde Hollandsche IJssel (R)
0341	Vlist
0342	Groote Kerkvliet
0343	Lekkerkerksche Boezem
0344	De Veen
0345	Kleine Wetering
0346	Geervliet
0347	Veenwetering
0348	Molenvliet (van de Polder Berkenwoude)
0349	Ringvaart (van de Polder Berkenwoude)
0350	Molenvliet (van de Polder De Nesse)

0351	Vliet gemeen met polder Berg-Ambacht	(together with the polder Berg-Ambacht)
0352	Buitenwetering	
0353	Hooge Boezem	boezem = reservoir
0354	Nieuwe Wetering	
0355	Lopikerwetering	
0356	Koedood	
0357	Zuidpoldersche Boezem	
0358	Groote Duiker	
0359	Kleine Duiker	
0360	Blaakwetering	
0361	Devel	
0362	Oude Wetering (ten Zuid-Oosten van Streefkerk)	(to the south-east of Streefkerk)
0363	Boezem van de Overwaard	
0364	Groote of Achter Waterschap	
0365	Ammersche Boezem	
0366	Dwarsgang	
0367	Smoutjesvliet	
0368	Ottolandsche Vliet	vliet = brook
0369	Kromme Elleboog	
0370	Peursumsche Vliet	
0371	Giessen	
0372	Noordeloos	
0373	Kleine Vliet	
0374	Schelluinsche Vliet	
0375	Nieuwe Waterschap	
0376	Alblas of Graafstroom	
0377	Kanaal van Steenenhoek	
0378	Merwedekanaal (R)	
0379	Oude Zederik	
0380	Huibert	
0381	Linge (R voor gedeelte vanaf de Merwede tot de Korenbrugsluis te Gorinchem)	(federal for that part from the Merwede to the Korenbrug locks at Gorinchem)
0382	Schaayksche Wetering	
0383	Hartelkanaal (R)	

0384	Brielse Meer	meer = lake
0385	Het Spui	
0386	De Holle Mare	
0387	Kanaal door Voorne	canal through Voorne
0388	De Lage Weg	
0389	Bergroede	
0390	Harregat	gat = opening
0391	2e Raadsheerenhoek	
0392	1e Raadsheerenhoek	
0393	De Eerste Vliet	
0394	Vierambachtenboezem	
0395	Brabandsche Wetering	
0396	's Landswatering	
0397	Piershilsche Gat	
0398	Groote Gat	
0399	Vissersvliet	
0400	Kleine Gat	
0401	Het Haventje	
0402	Borrekeen	
0403	West-Binnenhaven	
0404	Vliet (ten Nood-Oosten van Klaaswaal)	(to the north-east of Klaaswaal)
0405	Kreek (ten Zuiden van Heinenoord)	(to the south of Heineoord)
0406	Boezem- en Molenvliet	
0407	Binnenbedijkte Maas	
0408	Boezemvaart	
0409	De Kreek (ten Oosten van Maasdam)	(to the east of Maasdam)
0410	Klein-Kooidiep	
0411	Verlorendiep	
0412	Schuringsche Haven	haven = harbour
0413	Nieuwehaven	
0414	Oude Haven (ten Oosten van Strijen)	(to the east of Strijen)
0415	Strijensche Haven	
0416	Meer	
0417	Oude Mol	
0418	Westkil	

0419	Oost-Kil	
0420	Sluiskil	
0421	Bovenkil	
0422	Noorderdiep	
0423	Noorder-Elst	
0424	Kwalgat	
0425	Midden-Elst	
0426	Zuider-Elst	
0427	Grevelingenbekken (R)	
0428	Zuiderdiep (R)	
0429	Binnenhaven van Middelharnis	binnenhaven = inner harbour
0430	Bierkreek	
0431	Tilsche Watering	
0432	Kleine Kreek	
0433	Groote Kreek (ten Zuiden van Den Bommel)	(to the south of Den Bommel)
0434	Groote Kreek (ten Zuid-Oosten van Oude Tonge)	(to the south-east of Oude Tonge)

Polderwateren (Polder watercourses)

0435	Geerpolderplas	
0436	Langeraarsche Plassen (noordplas, zuidplas)	(north pond, south pond)
0437	Schoutenvaartsche Molentocht	
0438	Ringvaart gemeen met Polder Nieuwkoop en Noorden	(together with the Polder Nieuwkoop and Noorden)
0439	Ziende	
0440	Aarlanderveensche Wetering	
0441	Nieuwkoopsche Plassen (Schippersgat, Wijde van Vliet, Maarten Freekenwei, Noordeinderplas, Brampjesgat, Zuideinderplas)	
0442	Meije	
0443	De Vliet (Meijepolder)	
0444	Middelwetering	
0445	Hoogeveensche Vaart	
0446	Boventocht	
0447	Rietveldsche Vaart	
0448	Alphensche Wetering	

0449	Wonnewetering	
0450	Vaarwetering	
0451	Reeuwijksche Plassen	
0452	Broeker-Molenvliet	
0453	God Watering	
0454	Groote Schiewatering	
0455	De Laansloot	
0456	Stinksloot (ten Zuiden van Schipluiden)	(to the south of Schipluiden)
0457	Zweth	
0458	Oudelaanmolensloot	sloot = ditch
0459	Karitaatmolensloot	
0460	Oude Leede	
0461	Poldervaart	vaart = canal
0462	Ruivensche Vaart	
0463	Groote Duikertocht	
0464	Lange Tocht	
0465	Vliet gemeen met polder Polsbroek	(together with the polder Polsbroek)
0466	Stolwijksche Boezem	boezem = polder reservoir
0467	Molenvliet (polder Stolwijk)	vliet = brook
0468	Waal (R)	
0469	Oude Watering (polder Nieuw-Lekkerland)	
0470	Sliedrechtsche Binnenvliet	
0471	Kromme Giessen	
0472	Leiding gemeen met polder Lexmond	
0473	De Rik	
0474	Strijpsche Wetering	
0475	Sluiswetering	
0476	Middelhoeksche Wetering	
0477	Hoofdwetering	
0478	Korte Klinkert	
0479	Derryvliet	
0480	De Looije Kreeksche Watering	
0481	Hofwatering	
0482	De Oude Boezem	
0483	Vlieger Wetering	

0484 Oud-Piershilsche Watering
0485 Kromme Kreek
0486 Nieuw-Beijerlandsche Kreek
0487 Dromkreek
0488 Kreek (bij Dromkreek-Nieuw Beijerland) bij = near
0489 Oud-Beijerlandsche Kreek kreek = creek
0490 Oude Diep
0491 Loggervliet
0492 Watering de Zestig Roeden
0493 Hooge Vliet
0494 Lage Vliet
0495 Kleine Loo
0496 Groote Loo
0497 Haven van Goedereede (R) haven = harbour
0498 Haven van Dirksland (R)
0499 Oude Haven (ten Noord-Westen van Sommelsdijk)
(to the north-west of Sommelsdijk)
0500 Zuiddiep
0501 Klaasjeswater of Oude Dee of = or

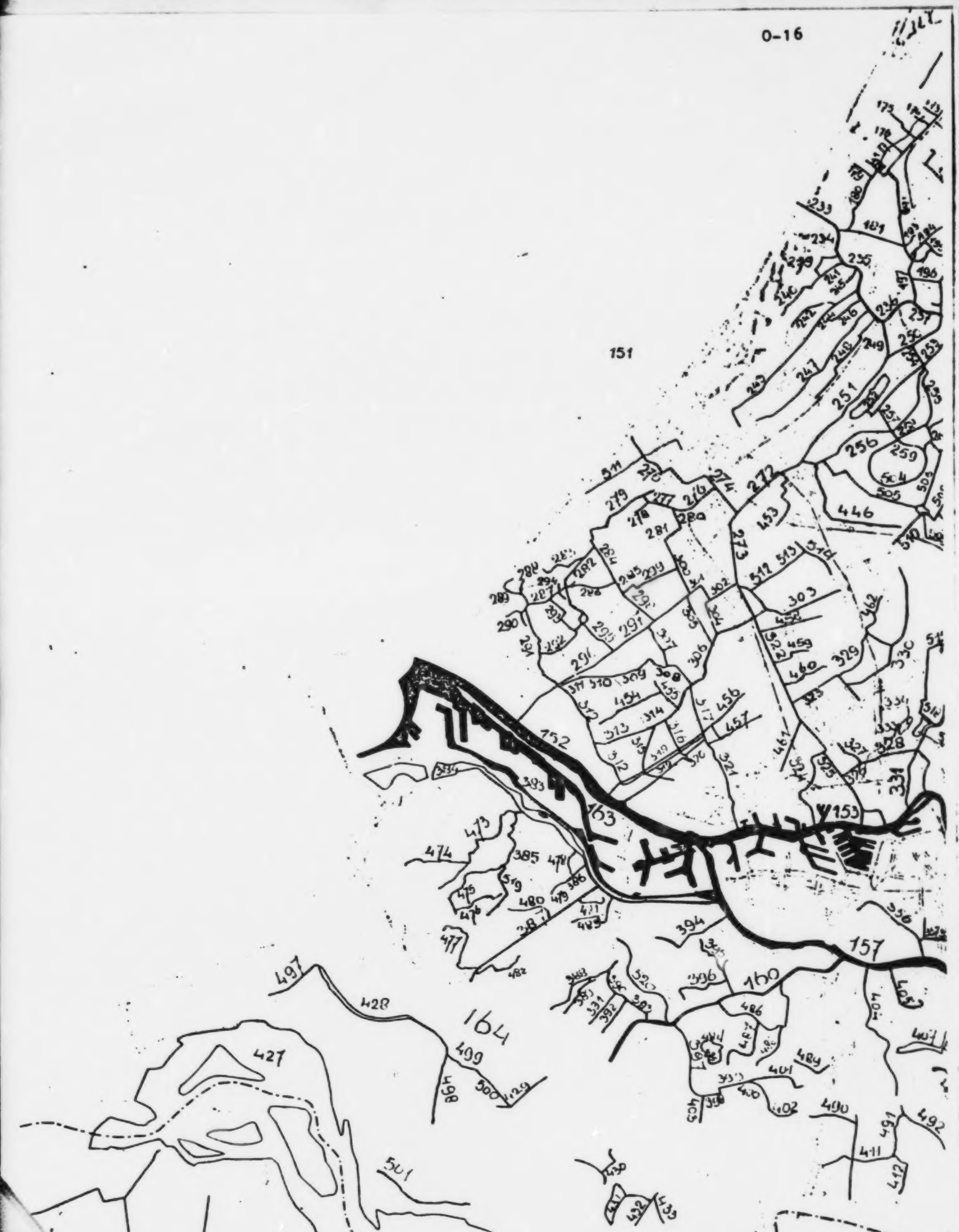
Inlaatleidingen (connecting watercourses)

0502 Westvaart vaart = canal
0503 Geer- of Papenvaart
0504 Ringsloot van de Zoetermeersche Meerpolder
0505 Voorwatering
0506 Leidsche Wallenwetering
0507 Benthuizervaart
0508 Zegwaartsche Wegwatering
0509 Kleine Dobbe
0510 Delftsche Wallenwetering
0511 De Beek
0512 Binnenboezem van Nootdorp
0513 Tweemolentjesvaart
0514 Noordpoldervaart
0515 De Vaart

0516	Lange Vaart
0517	De Boezem
0518	Strekvaart
0519	Nieuwenhoornsche Vaart
0520	Bernisse

Grenswateren (behorend tot de provincies N-Holland en Utrecht)
(border watercourses -- belonging to the provinces of North-Holland and Utrecht)

0521	Ringvaart van de Haarlemmermeerpolder
0522	Westeinderplassen
0523	Amstel Drechtkanaal
0524	Kromme Mijdrecht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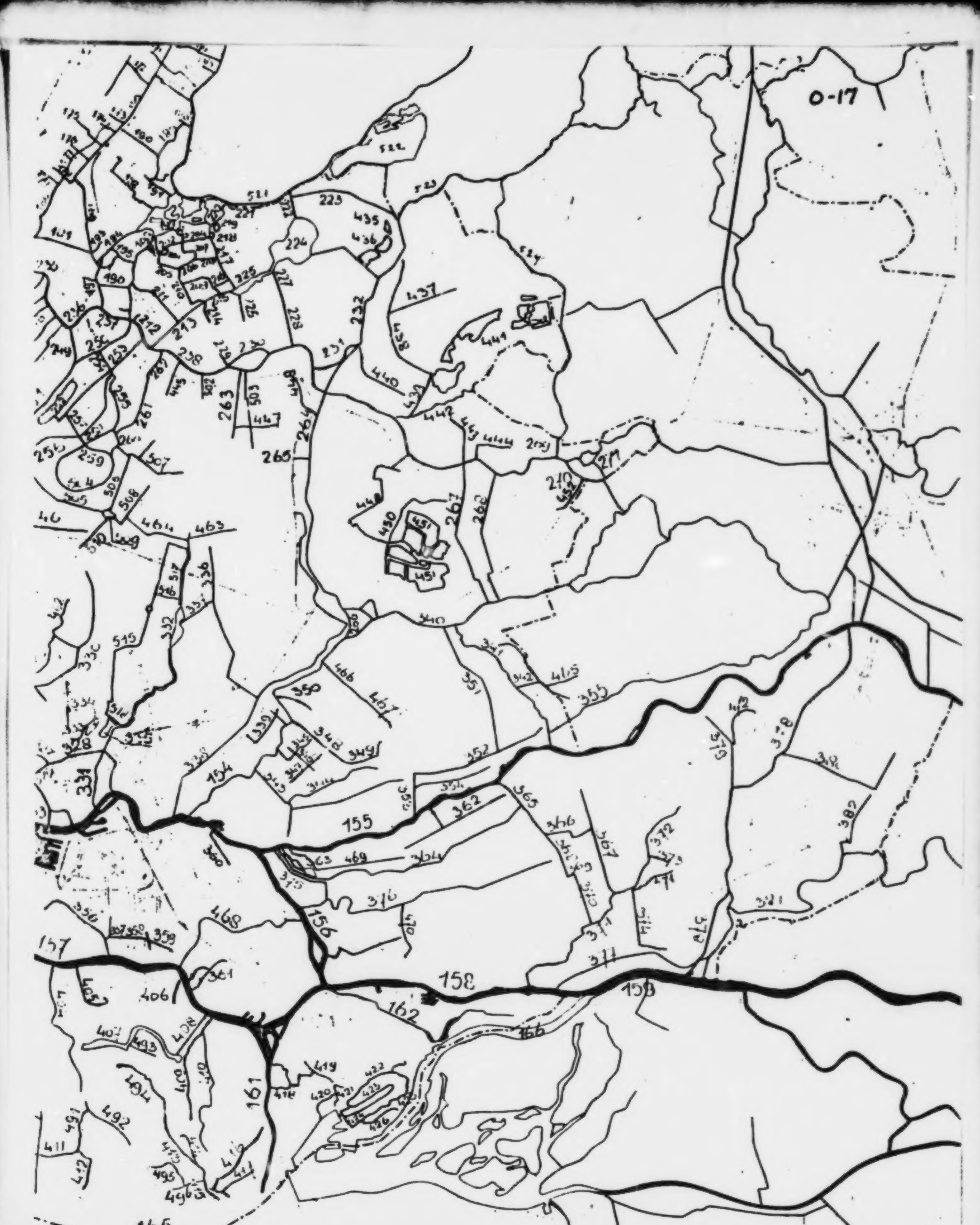
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OPPERVLAKTEWATEREN (ALFABETISCH)

IN DE PROVINCIE ZUID-HOLLAND

0-18

(surface level watercourses (alphabetic) in the province of Zuid-Holland)

Van de met (R) gemerkte wateren berust het kwaliteitsbeheer bij het Rijk

(the watercourses marked with (R) are under the quality control of the federal government)

0232	Aarkanaal
0440	Aarlanderveensche Wetering
0209	Achterwetering
0220	Ade
0234	Additioneele Kanaal
0275	Afvoerkanaal
0208	Akkersloot
0376	Alblas of Graafstroom
0448	Alphensche Wetering
0523	Amstel-Drechtkanaal
0365	Ammersche Boezem
0511	Beek de
0158	Beneden Merwede (R)
0507	Benthuizervaart
0389	Bergroede
0334	Bergsche Achterplas
0335	Bergsche Voorplas
0323	Berkelsche Zweth
0520	Bernisse
0430	Bierkreek
0407	Binnenbedijkte Maas
0512	Binnenboezem van Nootdorp
0429	Binnenhaven van Middelharnis
0360	Blaakwetering
0332	Bleiswijksche meren
0202	Boekhorstvaart
0517	Boezem de
0363	Boezem van Overwaard
0408	Boezemvaart
0406	Boezem- en Molenvliet
0283	Boomawatering
0320	Boonervliet
0402	Borrekeen
0293	Boschsloot
0421	Bovenkil
0159	Boven-Merwede (R)
0446	Boventocht
0329	Bovenvaart of Molenwatering
0224	Braassemermeer
0395	Brabantsche Wetering
0310	Breelee
0317	Bree- of Lichtvoetswatering
0384	Brielse Meer
0452	Broeker-Molenvliet
0214	Bruine Wetering
0352	Buitenwetering
0163	Calandkanaal (R)
0325	Delfshavensche Schie
0322	Delftsche Schie
0273	Delftsche Vliet
0510	Delftsche Wallenwetering
0479	Derryvliet
0361	Devel
0240	Dijkwatering
0178	Dinsdagsche Watering
0248	Dobbewatering
0213	Does
0161	Dordtsche Kil (R)
0223	Drecht
0487	Dromkreek
0268	Dubbele Wiericke
0301	Dulder
0366	Dwarsgang
0211	Dwarswatering
0393	Eerste Vliet de
0260	Elleboogsche Watering
0185	Elsbroekervaart
0267	Enkele Wiericke
0278	Escampkanaal
0177	Fagel- of Vogelsloot

0306	Gaag
0236	Galgewater
0286	Gantel
0435	Geerpolderplas
0503	Geer- of Papenvaart
0346	Geervliet
0340	Gekanaliseerde Hollandsche IJssel (R)
0371	Giessen
0453	God Watering
0264	Gouwe
0269	Grecht
0427	Grevelingenbekken (R)
0307	Groeneveldsche of Monsterwatering
0358	Groote Duiker
0463	Groote Duikertocht
0287	Groote Gantel
0398	Groote Gat
0342	Groote Kerkvliet
0433	Groote Kreek (t.Z.v. Den Bommel)
0434	Groote Kreek (t.Z-O.v. Oude Tonge)
0496	Groote Loo
0454	Groote Schiewatering
0195	Groote Sloot
0241	Groote of Valkenburgsche Watering
0364	Groote of Achter Waterschap
0274	Haagsche Vliet of Trekvaart
0169	Haarlemmer Trekvaart
0390	Harregat
0221	Hanepoel
0164	Haringvliet (R) (incl. Vuile of Hitsertsche Gat)
0383	Hartelkanaal (R)
0498	Haven van Dirksland (R)
0497	Haven van Goedereede (R)
0188	Haven van Lisse
0228	Heimanswetering
0337	Hennipsloot
0401	Het Haventje
0385	Het Spui
0170	Hillegommerbeek
0481	Hofwatering
0165	Hollandsch Diep (R)
0154	Hollandsche IJssel (R)
0386	Holle Mare de
0285	Holle Watering
0477	Hoofdwetering
0353	Hooge Boezem
0445	Hoogeveensche Vaart
0493	Hooge Vliet
0380	Huibert
0271	Jaap-Byzerwetering
0199	Kagerplassen (Balgerij, Dieperpoel, Eymerspoel, Kever, Laeck, Norremeer, Sever, Spijkerboor, Spriet, Warckerlee, Zweiland)
0377	Kanaal van Steenenhoek
0387	Kanaal door Voorne
0459	Karitaatmolensloot
0242	Kaswatering
0233	Katwijksche Kanaal
0302	Kerstanje
0219	Kiekpoel
0501	Klaasjeswater of Oude Dee
0509	Kleine Dobbe
0359	Kleine Duiker

0400	Kleine Gat
0432	Kleine Kreek
0495	Kleine Loo
0373	Kleine Vliet
0410	Klein-Kooidiep
0239	Kleine Watering
0345	Kleine Wetering
0355	Koedood
0212	Kokwatering
0218	Koppoel
0478	Korte Klinkert
0281	Korte Laak
0249	Korte of Waddinger Vliet
0246	Korte Watering
0300	Korte of Reynerwatering
0167	Krammer (R)
0405	Kreek (t.Z.v. Heineoord)
0488	Kreek (bij Dromkreek-Nieuw Beijerland)
0409	Kreek de (t.O.v. Maasdam)
0231	Kromme Aar
0215	Kromme Does
0369	Kromme Elleboog
0471	Kromme Giessen
0485	Kromme Kreek
0524	Kromme Mijdrecht
0270	Kromwijkerwetering
0424	Kwalgat
0276	Laakhaven
0277	Laakkanaal
0455	Laansloot de
0494	Lage Vliet
0230	Lagewaardsche Rijn
0388	Lage Weg de
0396	's Landswatering
0280	Lange Laak
0436	Langeraarsche Plassen (Noordplas, Zuidplas)
0464	Lange Tocht
0516	Lange Vaart
0298	Lange Watering
0311	Leewater
0309	Lee- of Lierwater
0472	Leiding gemeen met polder Lexmond
0197	Leidsche Vaart
0506	Leidsche Wallenwetering
0155	Lek (R)
0343	Lekkerkerksche Boezem
0381	Linge (R voor gedeelte vanaf de Merwede tot de Korenbrugsluis te Gorinchem)
0187	Lisserbeek
0491	Loggervliet
0304	Look
0294	Loopend Gat
0279	Loosduinsche Vaart
0480	Looye Kreeksche Watering de
0355	Lopikerwetering
0305	Lots- of Harnaschwatering
0180	Maandagsche Watering
0190	Mallegat (Lissermallegat)
0416	Meer
0253	Meerburger Watering
0259	Meer- of Buurwatering
0378	Merwedekanaal (R)
0442	Meye
0476	Middelhoeksche Wetering
0319	Middelvliet
0316	Middelwatering
0444	Middelwetering
0425	Midden-Elst
0229	Molensloot
0348	Molenvliet (v.d. polder Berkenwoude)
0350	Molenvliet (v.d. polder De Nesse)

0467 Molenvliet (polder Stolwijk)
0339 Molenwetering
0288 Monstersche Vaart

0292 Naaldwijksche Vaart
0486 Nieuw-Beyerlandsche Kreek
0413 Nieuwehaven
0153 Nieuwe Maas (R)
0166 Nieuwe Merwede (R)
0519 Nieuwenhoornsche Vaart
0237 Nieuwe Rijn
0266 Nieuw Scheepvaart Kanaal
0257 Nieuwe Vaart (bij Stompwijk)
0282 Nieuwe Vaart(t.N.v. Poeldijk)
0290 Nieuwe Vaart (bij 's-Gravenzande)
0312 Nieuwe Water
0375 Nieuwe Waterschap
0152 Nieuwe Waterweg (incl. Het Scheur) (R)
0354 Nieuwe Wetering
0441 Nieuwkoopsche Plassen (Brampjesgat, Freekenwei, Maarten, Noordeinderplas, Schippersgat, Wijde van Vliet, Zuideinderplas)
0156 Noord (R)
0261 Noord-Aa
0372 Noordeloos
0422 Noorderdiep
0423 Noorder-Elst
0328 Noorderkanaal
0514 Noordpoldervaart
0318 Noordvliet
0151 Noordzee (R)

0181 Oegstgeesterkanaal
0226 Ofwegenerwatering
0258 Ommedijksche Watering
0182 Oosteindervaart
0314 Oostgaag
0419 Oost-Kil
0263 Oostvaart
0368 Ottolandsche Vliet
0265 Otwegwetering
0489 Oud-Beyerlandsche Kreek
0207 Oude Ade
0482 Oude Boezem de
0490 Oude Diep
0414 Oude Haven (t.O.v. Strijen)
0499 Oude Haven (t.N-W.v. Sommelsdijk)
0458 Oudelaanmolensloot
0460 Oude Leede
0157 Oude Maas (R)
0417 Oude Mol
0238 Oude Rijn
0289 Oude Vlot of Vlotwatering
0469 Oude Watering (polder Nieuwe-Lekkerland)
0222 Oude Wetering (bij Oude-Nieuwe Wetering)
0362 Oude Wetering (t.Z-O.v. Streefkerk)
0379 Oude Zederik
0484 Oud-Piershilsche Watering

0370 Peursumsche Vliet
0397 Piershilsche Gat
0303 Pijnackersche Vaart
0193 Poelmeer
0291 Poelwatering
0461 Poldervaart

0392	1e Raadsheerenhoek
0391	2e Raadsheerenhoek
0451	Reeuwijksche Plassen
0447	Rietveldsche Vaart
0235	Rijn
0250	Rijn-Schiekanaal
0217	Rijpwetering
0473	Rik de
0189	Ringsloot (Lisse-Sassenheim)
0504	Ringsloot van de Zoetermeersche Meerpolder
0333	Ringvaart (t.Z.v. Schiebroek)
0349	Ringvaart (v.d.polder Berkenwoude)
0521	Ringvaart v.d. Haarlemmermeerpolder
0438	Ringvaart gemeen met polder Nieuwkoop en Noorden
0338	Ringvaart v.d.polder Prins Alexander
0336	Ringvaart v.d. Zuidplaspolder
0330	Rodenrijsche Vaart
0331	Rotte
0327	Rotterdamsche Schie
0462	Ruivensche Vaart
0191	Sassenheimervaart
0382	Schaayksche Wetering
0374	Schelluinsche Vliet
0324	Schiedamsche Schie
0326	Schie-Schiekanaal
0174	Schipperssloot
0173	Schippersvaart
0171	Schulpvaart
0412	Schuringsche Haven
0470	Sliedrechtsche Binnenvliet
0245	Slotwatering
0420	Sluiskil
0475	Sluiswetering
0367	Smoutjesvliet
0216	Spijkersloot
0160	Spui (R)
0172	Steengrachtkanaal
0205	Stingsloot (t.Z.v. Oud-Ade)
0196	Stinksloot (t.N.v. Leiden)
0456	Stinksloot (t.Z.v. Schipluiden)
0466	Stolwijksche Boezem
0256	Stompwijksche Vaart
0518	Strekvaart
0415	Strijensche Haven
0295	Strijp
0474	Strijpsche Wetering
0431	Tilsche Watering
0513	Tweemolentjesvaart
0206	Vaarsloot
0515	Vaart de
0450	Vaarwetering
0344	Veen de
0247	Veenwatering
0347	Veenwetering
0186	Venenburg-Elsbroekkanaal
0201	Vennemeer
0411	Verlorendiep
0394	Vierambachtenboezem
0399	Vissersvliet
0321	Vlaardingervaart
0483	Vliegen Wetering
0251	Vliet (t.N.v. Leidschendam)
0404	Vliet (t.N-O.v. Klaaswaal)
0443	Vliet de (Meyepolder)
0351	Vliet gemeen met polder Bergambacht
0465	Vliet gemeen met polder Polsbroek
0252	Vlietland
0341	Vlist

0176 Vogelsloot
0168 Volkerak (R)
0505 Voorwatering
0184 Vossevaart
0254 Vrouwenvaart

0468 Waal (R)
0162 Wantij (R)
0194 Warmonder-Leede
0244 Wassenaarsche Watering
0492 Watering de Zestig Roeden
0299 Wateringsche Vaart
0183 Weerlanervaart
0262 Weipoortsche Vliet
0284 Wennetjessloot
0403 West-Binnenhaven
0522 Westeinder Plassen
0313 Westgaag of Spartelvaart
0418 Westkil
0502 Westvaart
0225 Wijde Aa
0179 Woensdagsche Watering
0449 Wonnewetering
0227 Woudwetering

0175 Zanderijvaart
0192 Zandsloot
0508 Zegwaartsche Wegwatering
0203 Zevenhuizervaart
0439 Ziende
0308 Zijde
0198 Zijl
0243 Zijlwatering
0200 Zijp
0204 Zomersloot
0255 Zuid-Buurtsche Watering
0500 Zuiddiep
0428 Zuiderdiep (R)
0426 Zuider-Elst
0315 Zuidgaag
0357 Zuidpoldersche Boezem
0272 Zuidvliet
0210 Zuidzijdervaart
0297 Zweth (t.Z-W.v. Rijswijk)
0457 Zweth (t.N.v. Kethel)
0296 Zwethkanaal

P. FORM OF EFFLUENT RELEASED INTO THE OPEN AIR

1 Gas without mixing with environmentally-present gases such as air, N_2, CO_2, or water vapour

2 Gases mixed with air or other environmentally-present gases

3 Material whose particle size is mainly less than or equal to 10 micron

4 Material whose particle size is mainly greater than 10 micron

5 Material whose particle size is unknown

6 liquid droplets, mist, aerosol

Q. EXPECTED MASS, VOLUME, OR HEAT FLOW

0	will decrease to zero
1	about 0.01 of the present value
2	about 0.1 of the present value
3	about the same as the present value
4	about 3 times the present value
5	about 10 times or greater than the present value

R. MEANS OF PRODUCING EFFLUENT

00 not applicable or unknown

For effluents from combustion processes (also for driers, naphtha crackers, etc.)

01 combustion of natural gas
02 combustion of other gases
03 combustion of oil with sulphur content less than 1% (e.g. HBO-I)
04 combustion of oil with sulphur content from 1 to 2% (e.g. HBO-II)
05 combustion of oil with sulphur content from 2 to 3%
06 combustion of oil with sulphur content from 3 to 4%
07 combustion of oil with sulphur content from 4 to 5%
08 combustion of oil with sulphur content from 5 to 6%
09 combustion of oil with sulphur content greater than 6%
10 combustion of coal
11 combustion of soft coal, wood and peat
12 combustion of gasoline
13 combustion of diesel oil
19 combustion of other fuels

For effluents from process other than combustion processes

20 normal plant operation (including daily cleaning operations, possible regeneration, etc. during which time the installation or apparatus continues normal operation)
21 starting-up of the installation or apparatus
22 shutting-down of the installation or apparatus
23 Cleaning of the installation or apparatus during which time the installation or apparatus is not normally operating
24 regularly occuring breakdowns
29 other processing conditions

For effluents arising from storage, shipping and transport

30 filling or emptying of storage tanks (with a fixed or adjustable lid)
31 expansion or evaporation of storage tanks (with a fixed or adjustable lid)
32 shipment to sheds, storage yards or rail yards

33 loading of sea-going ships
34 loading of lighters
35 loading of road and rail transport
36 ballasting of ships
37 cleaning of ships
38 cleaning of other means of transport
39 cleaning of storage and shipping facilities

S. UNITS OF FREQUENCY

0	continuous effluent throughout the year
1	per minute
2	per hour
3	per day
4	per month
5	per year

T. UNITS OF TIME

1 second
2 minute
3 hour
4 day
5 month

U. KINDS OF GAS CLEANING

00 no gas cleaning

Gravity separation

01 settling chamber

04 other separators using gravity forces

Inertial (centrifugal) separation

05 cyclone

06 multicyclone

07 circulating flow separator

14 other inertial separators

Electrofilters

15 dry electrofilter

16 dry electrofilter with mechanical dust removal

17 wet electrofilter

18 wet electrofilter with mechanical dust removal

19 other electrofilters

Cloth filters

20 filter mat (dry)

21 filter mat (damp)

22 filter - continuous belt

23 filter cloth with mechanical cleaning

24 filter cloth with pneumatic cleaning

29 other cloth filters

Deep bed filters

30 Grindbed filter

31 wax filter

34 other deep bed filters

Wet dust collectors and gas washers

40 washing towers

41 whirlwind washer

42 venturi washer

43 packed column

44 column with plates

49 other wet dust collectors and gas washers

50 Adsorption filters

51 activated carbon filter

52 silicate filter

53 aluminium oxide filter

59 other adsorption filters

60 Afterburners

61 flare

62 thermal afterburner

63 thermal afterburner with a combustion installation

64 catalytic afterburner

69 other afterburners

Other gas cleaning apparati

70 biofilter (bio-washer)

71 cooler or condensor

79 any other type of gas cleaning apparatus not mentioned above

V. DETAILS ON THE MEASUREMENT

This indicates the nature of the effluent determination (i.e. by whom and in what manner) (e.g. measured, calculated or estimated)

first box:

1 measured by the plant
2 measured by TNO
3 measured by others

second box:

1 estimation (e.g. using an emission factor)
2 calculation
3 one rough measurement (possible error greator than 20%)
4 one accurate measurement (possible error less than 20%)
5 measurements carried out on a regular basis
6 continuous measurements

W. NATURE OF THE WATER EFFLUENT

0 not applicable or unknown
1 in solution
2 floating solid matter (or in suspension)
3 precipitating solid matter
4 ascending solid matter
5 floating liquids (or in emulsion)
6 precipitating liquids
7 ascending liquids

X. TYPE OF WATER PURIFICATION APPARATUS

NOTE: Biological purification and purification of water originating from more than one installation must always be considered to be a separate installation in the Installation Component. For all other cases use the codes below:

first box:

0 no mechanical water treatment
1 grating for coarse wastes
2 sand basin or settling tank
3 grease or oil separator (not 4, 5 or 6)
4 API separator
5 corrugated plate interceptor (CPI)
6 parallel plate interceptor
7 sifting machine
8 floatation apparatus
9 other mechanical water treatment apparatus

second box:

0 no chemical or physical-chemical water treatment
1 coagulation or flocculation
2 neutralization or precipitation (treatment with alkalis or acid)
3 decontamination (treatment with oxidation or reduction means, perhaps followed by neutralization)
4 other chemical or physical-chemical water treatments

APPENDIX 4

Miscellaneous Instructions pertaining to the Recording Process

4.1 EFFLUENTS AND CAPACITIES TO BE RECORDED

For the registration of air and water effluents the actual values of the effluents and the related data (such as the capacity of installations and apparati) must be recorded. With the exception of the cases to be mentioned below, the "actual value" means: the value corresponding to the year immediately preceding the year of recording or modification". The year to which the recorded data belong will be called the "recorded year".

In cases where the recording takes place in a definite region (e.g. a province), then a definite "year of recording or modification" as well as a "recorded year" can be prescribed. For the complete recording in the province of Zuid-Holland it has been agreed that 1974 will be the "recorded year" and 1975 the "year of recording or modification".

The following special cases could occur:

a. Changes brought about during or after the "recording year":

In this case the effluents are recorded as they are after the change has occurred, and are attributed to the "recorded year".

b. New constructions or changes in the existing plant, for which the plans have been prepared and which will be in operation before the end of the "year or recording or modification" or before the end of the recording period (for the cases of combined recording in a province or part thereof):

In this case the effluents and the relevant conditions would be recorded such as they would be expected to be after the commissioning or modification of the installation. If there is some certainty that after new installations have been commissioned, existing installations will be shut down, then the latter need not be registered.

c. New construction or modifications, which will only be in operation after the end of the "year of recording or modification" or after the end of the recording period (in cases of the combined recording in a province or part thereof), or in cases where the development phase has not been completed at the moment of recording:

Effluents in these cases ought not to be included in the recording, except as a modification or substitution in the "expected mass or volume flow".

Make sure that for installations one always records the actual production capacity on the appropriate installation data form. This is recorded in the last 2 boxes reserved on the form for the name of the installation. The rules above hold for the actual production capacity as well.

4.2 Calculation of the Variation in the Mass and Volume Flow

The variation noted on the data forms means the variation in time of the effluent and not the accuracy of the measured or estimated effluent. In general only a rough guess can be made of the variation.

The following approximation may be used for a calculation of the variation in the effluent:

1. For effluents which vary in a gaussian fashion or nearly so, the variation may be calculated, if there are n measurements, by the formula:

$S = A w$ where: s = variation

w = difference between the highest and the lowest values of the n measurements

A = factor dependent on n (see table below)

For large values of n use the formula:

$$s = W/4$$

By using the value for the average amount of effluent, the variation could also be expressed as a percentage of the average value

TABLE The factor A as a function of the number of measurements

n	A	n	A	n	A
2	0,88	9	0,34	16	0,28
3	0,59	10	0,32	17	0,28
4	0,48	11	0,32	18	0,27
5	0,43	12	0,31	19	0,27
6	0,39	13	0,30	20	0,27
7	0,37	14	0,29		
8	0,35	15	0,29		

2. Should the effluent of an on-off system (such as for a gas or oil-fired boiler) be recorded as a constant effluent, then the variation would be 100% and should be recorded as 99%.

4-5

UPDATE OF THE MANUAL

Users are requested to make modifications to the manual and to indicate these in the columns below,

Date of Modification	Initials	Date of Modification	Initials